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THE
POULTRY AND EGG INDUSTRY OF LEADING
EUROPEAN COUNTRIES.

BY

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U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF ANIMAL INDUSTRY,
Washington, D. C., September 27, 1904.

SIR: I have the honor to transmit herewith an article dealing with the poultry and egg industry of leading European countries, by Dr. Andrew Fossum, of the Editorial Office of this Bureau, and to recommend its publication as a bulletin. The special feature of this article is the full description of the methods of producing and marketing eggs in Denmark, by which that little Kingdom is able to secure a constant foreign trade at high prices.

Respectfully,

D. E. SALMON,
Chief of Bureau.

Hon. JAMES WILSON,
Secretary.

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THE POULTRY AND EGG INDUSTRY OF LEADING EUROPEAN COUNTRIES.^a

By ANDREW FOSSUM, PH. D.,
Editorial Office, Bureau of Animal Industry.

INTRODUCTION.

It is necessary only to glance at the imports and exports of eggs for the leading countries of Europe to understand the place that the egg trade now occupies in the commerce of the world. Rapid transportation has made it possible to ship this perishable article to distances unthought of before. So it has come to pass that eggs, which used to be consumed where they were produced, now form an important part of the food supply of our large cities. With Germany and England, respectively, importing eggs in 1902 valued at \$27,386,898 and \$30,702,575, it shows that the time is past when we should consider this an infant industry, and it is destined to expand greatly in the near future.

A perusal of this article shows that the consuming countries, as shown by their enormous imports of eggs, are the United Kingdom and Germany. Both of these great countries are increasing their consumption every year if one may judge from the imports. For instance, the imports into the United Kingdom, which in 1871 were valued at \$6,149,368, increased fivefold by 1902. In Germany the imports increased in value from \$17,103,108 in 1895 to \$27,386,898 in 1902.

The conspicuous position that Denmark now occupies in the European egg trade has called attention to the methods followed in the development of its poultry industry. Denmark was the first country to develop and perfect the system now in vogue in that country, and the principles have proved so sound that several other countries have followed in her steps.

The success of the enterprise has been so complete, both in Denmark and in other countries that have tried it, that the people of the United States can hardly afford to overlook it any longer. This industry in

^a From the nature of the subject in hand the official documents have been indispensable in preparing this report. The author has used freely whatever has suited the purposes of this report in Danish, English, French, and German publications, and it would hardly be possible to give due credit in every instance to each document. As regards Denmark, thanks are due to the following persons, who have furnished valuable data: Hr. J. Kornerup, Aarhus; Hr. Anton Thomsen, Terpling ved Holsted, and Hon. Raymond R. Frazier, United States consul at Copenhagen.

America is extensive, but it lacks organization to such an extent that in spite of the great production our large cities are paying famine prices for an inferior article. Organization along the lines followed in Denmark would be in the interest of the producer and consumer alike. The producer would obtain better prices and the consumer would obtain guaranteed fresh eggs of full weight.

England, which is the center of the European trade, is too remote to furnish a large opening for eggs from this side of the Atlantic so long as the conditions obtaining here continue. But the large cities upon the Eastern seaboard and in the interior of the country should, with better organization, be more profitable markets than any foreign market.

DENMARK.

NUMBERS OF POULTRY.

The earliest census of poultry took place in 1888. Since then there have been two censuses—one in 1893 and another in 1898. The table below shows the reports for these three years:

Numbers of poultry in Denmark in 1888, 1893, and 1898.

Year.	Chickens.	Turkeys.	Ducks.	Geese.
1888	4,592,000	32,000	644,000	214,000
1893	5,856,000	41,000	724,000	230,000
1898	8,767,000	52,000	803,000	211,000

It appears from this table that chickens, turkeys, and ducks have increased in number in the years between 1888 and 1898, while geese have decreased. This seems to be owing to the greater profitableness of the former.

As a rule, chickens are not kept separately, but in connection with other agriculture. Poultry is kept on all farms. But it is evident that the importance of keeping poultry is greater for the small than for the large farms, as the former lack other sources of income.

In 1895 there were in Denmark 236,860 farms and small holdings.^a According to the poultry census of 1898, there were 37 chickens on the average to the farm or holding. Distributed according to the acreage, Denmark has an average of 0.92 chicken to the acre. We should not lose sight of the fact that poultry keeping may be conducted with a small capital, and that in consequence of this it is possible for the poorest classes to go into it with promise of profitable returns.

^a Statistisk Tabelværk, Fjerde Række, Litra C. Nr. 9 Danmarks Jordbrug den 1ste Januar 1895.

THE EXPORT AND IMPORT TRADE.

The earliest statistics of the exports of eggs from Denmark proper go back to 1861, while the imports begin three years later, being counted for the first three years with those of Schleswig-Holstein and the Lubeck and Hanseatic Enclaves.

A table showing the imports and exports of eggs for the period 1861 to 1902 is given herewith:

Danish imports and exports of eggs, 1861 to 1902.

Year.	Imports.		Exports.	
	Quantity.	Value.	Quantity.	Value.
	<i>Dozens.</i>	<i>Dollars.</i>	<i>Dozens.</i>	<i>Dollars.</i>
1861.....			13,707	
1862.....			16,745	
1863 <i>a</i>			21,790	2,987
1864-65.....	858		43,257	
1865-66.....	3,335		58,080	
1866-67.....				
1867-68.....	3,862		51,378	
1868-69.....	3,242		44,352	
1869-70.....	4,158		53,950	
1870-71.....	43,690		93,420	
1871-72.....	12,370		574,215	
1872-73.....	29,273		1,149,232	
1873-74.....	68,063	9,121	2,378,070	318,676
1874 <i>a</i>	38,125	5,395	1,972,697	279,145
1875.....	23,557	3,987	2,658,440	451,126
1876.....	117,237	19,129	2,328,888	382,712
1877.....	108,038	17,025	1,573,949	248,026
1878.....	94,750	13,819	2,001,622	296,112
1879.....	85,427	12,500	2,183,677	319,523
1880.....	135,305	19,581	3,320,092	520,483
1881.....	140,908	21,411	3,100,122	467,083
1882.....	206,357	31,640	3,983,408	616,774
1883.....	408,728	64,120	4,690,463	795,748
1884.....	424,678	63,242	6,071,870	904,204
1885.....	207,285	30,900	6,040,800	900,451
1886.....	173,658	24,188	7,752,618	1,080,072
1887.....	310,958	42,597	9,246,208	1,256,368
1888.....	738,078	96,386	8,389,437	1,236,236
1889.....	948,705	139,108	9,731,440	1,457,626
1890.....	1,705,223	276,942	11,143,255	1,541,754
1891.....	1,815,423	293,088	11,949,838	1,809,754
1892.....	1,768,030	264,547	13,232,140	1,933,220
1893.....	1,566,460	270,249	11,711,318	2,183,687
1894.....	1,422,673	211,837	13,250,073	2,020,464
1895.....	2,087,960	318,203	13,175,318	2,258,704
1896.....	2,296,617	343,835	16,375,873	2,764,902
1897.....	2,589,558	365,142	20,752,755	3,514,910
1898.....	2,146,977	312,690	22,260,902	3,668,353
1899.....	2,248,628	318,062	25,248,703	4,488,464
1900.....	3,098,830	403,440	27,646,617	4,870,096
1901.....	5,275,563	499,284	31,866,492	5,734,128
1902.....	4,587,760	678,576	36,403,125	6,527,944
1903.....			42,500,000	68,092,000

a The figures for this year are for all of 1863 and the first three months of 1864. After March 31, 1864, to 1874, the year ended on March 31; the year of 1874 is therefore shortened to nine months.

b Preliminary figures.

In treating of the exports of eggs from Denmark from 1861 up to the present time the general movements only are considered that have manifested themselves in the course of a series of years, and the minor fluctuations discarded that result from cold and unfavorable seasons or from the demands of temporary markets. The exports of 1861 were 13,707 dozens, and, although not the first, are plainly small enough to be considered the beginning. The exports of the first ten years are rather erratic, and show an uncertain condition of supply, but there is a general tendency toward increase.

During the next ten years the exports rose from 574,215 to 3,100,122 dozens. What contributed more than anything else to the increasing regularity in the exports of eggs was the fact that Denmark now found a large and steady market in England. Before this, Norway had been the chief customer, using Danish eggs chiefly to provision her large merchant marine; but in 1871 England took the lead, which she has ever since held, in buying Danish eggs. Beginning with the purchase of two-thirds of the Danish exports of eggs in 1871, England has always been the largest buyer and often taken nearly the entire supply. The Danes soon found it to their interest to win the good will of this great customer, and have systematically labored to improve the quality of the supply.

In the decade 1881 to 1890 we notice considerable improvement. The exports rise from a trifle under 3,100,122 to 11,143,255 dozens. The increase, moreover, is more steady and regular, and averages about 800,000 dozens a year for the decade. To this period, it will be remembered, belongs the rise of several poultry societies which helped to create and maintain a stronger interest in this industry.

The Danish Cooperative Egg Export Society came into the field in 1895 and brought life and vigor into the industry, and soon the exports rose by leaps and bounds, increasing at the average rate of 3,333,333 dozens a year. The Danes were already familiar with the workings of the cooperative system in other lines and now decided to apply its principles for the first time to the egg trade. They knew that they could not obtain better prices for their eggs so long as some of them continued to sell bad and dirty eggs, and that, as a matter of self-protection, it was necessary to oblige all who shipped under a common trade-mark to guarantee their products. In this way only could they compete in the best markets and obtain the highest prices. The egg trade is one of the industries to which the cooperative principles can be best adapted, and, one might even add, the one without which success is only possible under exceptional circumstances. Nothing can better demonstrate the correctness of the Danish views than the success which attended the undertaking. Instead of being the cheapest, Danish eggs now rank with the highest in the British market; and instead of exporting a few million dozens, as we might expect from a

small agricultural country, Denmark outranks all European countries, when the size of territory and population are taken into consideration. While Denmark in 1902 exported eggs valued at \$6,527,944, Germany, with an area more than fourteen times greater, imported eggs in the same year to the value of \$27,387,058.

The table below gives for 1900 the imports and exports of eggs for several countries and their percentage per capita:

Value of imports and exports of eggs and per cent per capita of population, 1900.

Country.	Imports.		Exports.	
	Dollars.	Per cent.	Dollars.	Per cent.
France	3,408,579	0.09	2,895,545	0.08
Germany	24,051,090	.43	140,082	.002
Italy	65,190	.002	9,656,840	.30
Russia			15,835,214	.15
Austria-Hungary	5,563,155	.12	20,150,285	.45
Belgium	1,962,424	.30	1,505,979	.23
Holland	1,074,802	.21	655,470	.13
England	26,308,396	.71		
Denmark	423,440	.17	4,852,676	1.98

The increase in the egg export has been so great as to change its relative position with regard to other items of export. The table of values below shows that eggs occupied the fifth or sixth place in 1878 and the third place in 1901:

<i>Exports in 1878.</i>		<i>Exports in 1900.</i>	
Butter	\$7,906,000	Butter	\$35,456,400
Cattle	5,876,400	Bacon	22,214,000
Horses	1,715,200	Eggs	5,681,600
Bacon and meat	1,527,600	Meat	3,108,800
Eggs	321,600	Horses	3,082,000
		Cattle	2,224,400

FOREIGN EGGS IN DENMARK.

The imports, like the exports, have steadily grown. From a few thousand dozens in the "sixties" they have risen to over 4,000,000 dozens in forty years. Sweden and the former Danish provinces (Schleswig-Holstein and Lauenburg) used to be the principal sources of the supply, till Russia supplanted them during the last decade. Nearly all the eggs imported into Denmark go into home consumption, only a small fraction entering into the reexports. The transit trade, which figures so largely in some countries, is here very small. The imports did not reach the 100,000-score mark (score=20 eggs) till the early "eighties." Beginning with 1890 they have remained for ten years at about 1,000,000 scores, and in the last three years have doubled. As Danish eggs bring a high price and are in demand, it is more profitable to sell their own product and to supply some of the home demand by imports from abroad. Foreign eggs, at the same time, being com-

paratively fresh on their arrival in Denmark, would become rather old when they reached the British consumer.

IMPORTS AND EXPORTS OF POULTRY.

A table giving the imports and exports of poultry shows that the former have far exceeded the latter during the last eighteen years:

Danish imports and exports of poultry, 1885 to 1902.

Year.	Imports.		Exports.		Year.	Imports.		Exports.	
	Number.	Value.	Number.	Value.		Number.	Value.	Number.	Value.
1885.....	56,409	\$56,238	2,102	\$2,453	1894.....	139,127	96,944	2,119	2,091
1886.....	21,096	18,770	1,801	2,027	1895.....	146,233	101,503	4,835	4,632
1887.....	13,253	11,792	1,790	2,015	1896.....	82,151	53,940	4,075	4,041
1888.....	15,917	14,145	1,449	1,631	1897.....	70,384	56,589	1,546	1,657
1889.....	104,285	92,677	886	997	1898.....	57,373	47,936	1,420	1,522
1890.....	79,698	70,827	2,197	2,473	1899.....	49,078	35,396	2,800	2,948
1891.....	149,286	104,663	2,298	2,039	1900.....	21,905	17,608	3,897	4,636
1892.....	100,095	70,175	1,871	1,855	1901.....	54,019	43,443	3,701	4,958
1893.....	142,020	97,008	2,476	2,356	1902.....	36,891	29,668	6,081	7,879

POULTRY AND EGG SOCIETIES IN DENMARK.

The fact that so many poultry societies lead a perfunctory life and exist only on paper might lead one to overlook their importance. But what poultry societies can accomplish in spreading information and inculcating rational methods in the industry, we may learn from the history of the poultry societies in Denmark. In that country we can trace back to the societies the influence that elevated the industry from the low estate in which it was before reaching the rank it now occupies. The societies, with intelligent men at their head, led the way. As it was the societies that made the improvements and brought about the exceptional conditions that now obtain in this industry in Denmark, it will be worth our while, in order to understand the progress that has been made, to discuss at some length the history of these societies. The purpose of a few of these following pages will be to give an account of the history of the different societies that have contributed to the remarkable development of this industry. At the same time the purpose has been maintained to give all information obtainable about the poultry organizations in other leading European nations, together with a full record of imports and exports of poultry and eggs.

HISTORY OF THE DANISH POULTRY SOCIETIES.

SOCIETY FOR POULTRY BREEDING IN DENMARK.^a

HISTORY AND DEVELOPMENT.^b

The first impulse tending to better organization in poultry raising as well as in several other industries came from Consul-General Hen-

^a For rules, see Appendix I, p. 472; for by-laws, p. 474.

^b A comprehensive sketch of these societies appeared in the quarter-centennial number of *Tidsskrift For Fjerkræavl*, Aarhus, June 16, 1903.

drik Pontoppidan, a man held in great esteem in Denmark for his broad and high-minded patriotism. In June, 1878, a small but enthusiastic party met on his estate, Constantinsborg, near Aarhus, to consider in an informal way what could be done to improve the condition of the poultry industry. After a preliminary meeting they organized a society at Aarhus on November 30 of the same year. That there was genuine interest in the enterprise appears from the fact that forty speakers listed for the occasion did not exhaust the fund of enthusiasm. The society adopted the name "The Society for the Promotion of Poultry Breeding, Especially of Chicken Breeding and Egg Trade." As the meeting declared, the object was to be attained by discussions, lectures, exhibits, and pamphlets; by giving advice and information in matters pertaining to poultry breeding; by supplying the farmers with breeding animals and sitting eggs; by building a model poultry run, and by furthering the interests of the industry in every way that the directors might deem expedient. It also assists local societies in their exhibits by giving advice, lending cages, selecting judges, and offering prizes. The same meeting adopted a series of rules, or laws. According to these the practical management is in the hands of the directors, while the final authority is in the general meeting. To keep in touch with all the members, scattered over the whole country, each town or district having ten members sends one delegate to the annual meeting. To be within the financial reach of the small farmers, the annual fee is 2 kroner (53.6 cents). The officers were able and enthusiastic men. Such was the organization of this society, the first of its kind not only in Denmark but in all Europe.

Pamphlets sent to all parts of the land stirred up a lively interest in the undertaking by calling attention to the neglect in which the industry found itself, and its importance in France and elsewhere. It would prove an important source of income to all, and not least to the small farmers and tenants.

From small beginnings the society has grown in numbers and importance. The membership at the time of the first general meeting was 600; in 1891 there were 2,373 members, and in June, 1903, 3,456. The standing that the industry enjoys appears from the fact that a baron is its president and the crown prince its patron.

The following table shows the number of members every three years from 1879 to 1903:

1879	1, 351	1894	2, 268
1882	2, 600	1897	2, 900
1885	2, 754	1900	3, 124
1888	2, 489	1903	3, 456
1891	2, 373		

It soon became evident that it was necessary to publish a periodical in order to reach all the members. The first general meeting, March,

1879, agreed to this, and the first number of the paper appeared March 10 of the same year. Georg Bricka was the first editor, and he continued in that capacity till the end of 1901, when he was succeeded by Fr. Hansen, the present editor. Georg Bricka was a great worker and a man of extensive information. Besides writing at times the entire issue of the journal, he wrote several books on poultry breeding—one of them the largest in the language. He was a member and for ten years president of the parish council, teacher in the grammar school of Fredericksborg, musical leader in his town of Aarhus, and judge of poultry exhibits and prize compositions. He continued to be the editor till the end of 1901, when he died. By private subscriptions the society erected a monument to his memory the following year. A man of his energy and sound character was sure to make a lasting impression upon the society, which developed on broad and sound principles. The journal is free to the members of the society, but the outlay in maintaining it is many times repaid by the influence it exerts in holding the members together and in furthering the cause it represents. "For many members," as the president, Baron Rosenkrantz, wrote to Bricka, "the journal is the society. They do not join or withdraw from the society, but subscribe to or discontinue the paper."

This new industry had appeared at the right moment, and it was only necessary to find some means of spreading information in order to advance the cause. They had to hit upon the right kind of information and how to spread it effectively among the peasants. At first the society made use of Bricka's Brief Guide, but in 1890 adopted Fenger's Brief Directions in Poultry Breeding, which in a few pages gives the fundamental principles of practical poultry keeping.

At first these pamphlets were sent to school teachers for distribution, but the promoters soon satisfied themselves that this was not the best method and abandoned it. Since then the society has distributed over 60,000 copies through the farmers' credit associations, and in more expensive bindings as prizes to those who drew "blanks" at the exhibitions.

Poultry shows should not be underestimated. Shows are as important in this as in the other lines of animal industry. They allow the members an opportunity to compare the results of their work, and thereby check and correct excesses and give a healthy direction to the industry. Then they serve as excellent places of exchange. Financially, they have usually shown a deficit, but in view of the general benefit done by them the society has, nevertheless, given twenty-eight shows during the twenty-five years it has existed.

The first exhibition of poultry occurred at Aarhus June 27 and 28, 1878. The members exhibited 213 birds. Of the purebred birds the Spanish were best represented. About 4,000 people visited the exhib-

its. It has been encouraging to note that greater interest in the work has always manifested itself in the locality where an exhibition has been held, and for this reason they hold their annual exhibitions first in one place and then another. They have been held in twenty-one different places since 1879. The one at Odense in 1900 exhibited 1,020 birds, but the largest and most striking was the quarter-centennial at Aarhus in 1903.

When this poultry society came into existence Danish eggs were small and held in low esteem in the British market. Many farmers kept back their product waiting for better prices, and the English complained that as soon as the price rose every case from Denmark contained pickled and spoiled eggs. In Denmark a score of small eggs brought as much as so many large ones, and it was too much to expect the farmers to make any sacrifice without a corresponding advantage. As a rule, they consumed the large ones and sold the rest. The society worked for an improvement by introducing the custom of buying and selling eggs by weight and not by number. The result was that a dozen large ones would bring a higher price, both on account of their size and weight. Although the English still handled eggs by the dozen, they paid more for large ones. In 1880 the directors entered into negotiations with the large egg dealers with the end in view of purchasing eggs by weight. These favored the idea and were willing to make a change, provided other dealers would do the same. Under these circumstances progress was slow, and years passed before they brought about the present condition of things, which is that the export trade is by weight. How far the Danes were in advance of the rest of the world appears from the fact that the Berlin authorities only last year recommended the use of weight in the egg trade, and some great nations still cling to the antiquated method of marketing eggs by the dozen.

In order to bring about an increase in the size of the eggs it was necessary to obtain better breeds of chickens, but no one knew as yet what kinds would adapt themselves to the country. To ascertain how they would thrive they distributed in 1880 to fifty persons in different parts of the country six hundred sitting eggs of purebred chickens on the condition that the recipients should report on the experiment in the fall. In the following year they sent out more eggs, and in 1883 postal cards with printed forms accompanied the eggs. It was found impossible in many cases to protect the eggs during transmission, and, as only a few reports were made, the plan was abandoned in 1885. An attempt to distribute pure stock proved almost equally unsuccessful.

The society had abandoned the plan of maintaining a model poultry farm in 1882 as being too expensive; but now, having stopped the distribution of eggs, they decided to distribute purebred chicks. As in the case of eggs, the poorer classes had the preference, and

could also to a certain extent choose the breeds they desired. The condition was that they report the results. There was less inconvenience regarding the reports, and altogether this method proved to be the most satisfactory, and contributed more than any other to improve the poultry breeds in the land. As many complaints were made of defects in the fowls sent out, the society decided to gather and inspect all chicks at Aarhus before making the distribution. This was expensive, but necessary, and permitted an exchange of cockerels.

At first the society sent out Italians and Minorcas in accordance with a plan that the latter, being less hardy, were distributed over the Islands and the former in Jutland. The society began to distribute specimens of the native kind in 1890, and has since experimented with other breeds. They distributed annually thirty-three birds at first, but since 1889 they have distributed as shown in the following table:

Distribution of poultry in Denmark, 1889 to 1902.

Year.	Young pullets.						Young cockerels.					
	Ital-ians.	Minor-cas.	Danish.	Orping-tons and Lang-shans.	Ply-mouth Rocks.	Total.	Ital-ians.	Minor-cas.	Danish.	Orping-tons and Lang-shans.	Ply-mouth Rocks.	Total.
1889.....	17	6	.....	.....	.....	23	.....	.....	.....	.....	.....	.....
1890.....	17	10	3	.....	.....	30	.....	.....	.....	.....	.....	.....
1891.....	20	1	5	.....	.....	26	.....	.....	.....	.....	.....	.....
1892.....	12	8	4	.....	.....	24	.....	.....	.....	.....	.....	.....
1893.....	17	8	.....	.....	.....	25	.....	.....	.....	.....	.....	.....
1894.....	14	6	5	.....	.....	25	.....	.....	.....	.....	.....	.....
1895.....	17	8	5	.....	.....	30	.....	.....	.....	.....	.....	.....
1896.....	31	12	3	.....	.....	46	.....	.....	.....	.....	.....	.....
1897.....	9	10	2	4	.....	25	7	3	.....	2	.....	12
1898.....	11	11	3	.....	.....	25	2	5	1	.....	.....	8
1899.....	11	10	2	2	.....	25	3	4	.....	1	.....	8
1900.....	7	8	3	.....	4	22	5	.....	.....	.....	.....	5
1901.....	13	4	.....	.....	8	25	3	3	1	.....	2	9
1902.....	10	9	1	.....	5	25	11	4	1	.....	5	21

The native poultry, by long and unsystematic crossing, had degenerated to such a degree that many despaired of finding the original stock. "It was seldom possible," we read in a poultry journal of 1880, "to find the Danish breed in a pure state." But a few isolated breeders had faith in the breed and hoped to restore it by careful selection. It possessed the advantage of being hardy and contented and perfectly adapted to the climatic and other conditions of the country. This breed is a fair layer, producing eggs the size of those of Wyandottes. A score weighs about 2.3 pounds. The cock is red and black and the hen is buff colored. Societies for the development of this breed sprang up in 1888, and finally in 1900 the three leading poultry societies agreed upon a standard whereby it could be recog-

nized. About this time special clubs or associations were formed for the purpose of improving the different breeds of poultry—Italians, Minorcas, Danish, etc. The object was not so much to make money as to bring out and perfect the best qualities of the breed and thus ultimately to make them more profitable to the country.

We have already seen that a lack of funds prevented the society from realizing its original plan of maintaining model poultry runs. Since 1893 experimental stations have been established—the first one at Aarhus for the native Danish breed and one at Copenhagen for the partridge-colored Italians. After receiving a state aid of 6,000 kroner (\$1,608) a year, the society has maintained six more stations—two for White Italians, one for Plymouth Rocks, one for Wyandottes and partridge-colored Italians, and one for Minorcas. The society has also awarded prizes for compositions on numerous subjects. This work is of a practical nature and has been of great benefit to the country.

GOVERNMENT.

According to the original draft of the constitution in 1878, the practical management of affairs was in the hands of the directors, while the final authority rested with the general meeting, consisting of representatives assembling annually. The meetings were held in different places each year, and it occurred that the locality where the meeting was held was so strongly represented that the resolutions hardly failed to be an expression of the local rather than of the general sentiment. Hoegh-Guldberg had called attention to this unfortunate condition in 1880, and two years later a change was made. Henceforth each district sent two delegates to the meeting of deputies. These in turn elected a president for three years and four directors for two years, who constituted the executive committee. The secretary-treasurer may be chosen outside the directorate. Thus all the counties were equally represented, but so long as each delegate had to pay his own expenses few came to the meetings; in 1887 only 14 appeared. So a change was made in that year. Thirty-eight representatives—2 from each county—replaced the former delegates. One-half of the delegates retired each year. They had the choice of their own successors as well as of the directorate, which now consisted of 11 members—5 from Jutland, 2 from Fyn, 3 from Sjaelland and Bornholm, and 1 from Lolland-Falster. The directors chose their own officers and the executive committee. Thus outside members had no influence. From being entirely democratic in the beginning the society had become oligarchic in form. That this continued without opposition for ten years is a tribute to the fairness and the ability of the governing body; and it was a mark of the confidence of the members that when a democratic change took place only three societies availed themselves of the privilege of sending representatives the first year.

Centralization now approached the danger line, and it was the part of prudence to work in the opposite direction and develop independent local associations. Fortunately, in 1887, the poultry society of Hjørring had applied for admission as an affiliated society. This was a fruitful suggestion, and prompted the society to admit others of that kind and to encourage the formation of district societies and other organizations with the purpose of admitting them in time as affiliated societies. These paid no fees, but simply pledged a certain number of their members to the head society and received in turn a corresponding number of copies of the society's periodical and the society's aid in organizing exhibitions. In 1897 it was agreed that the counties should each henceforth elect two representatives. Finally, in 1902, a new constitution was adopted embodying further changes in this direction. Accordingly there are now 20 districts, each sending 2 representatives—their president and vice-president—to the general meeting. The meeting, as a rule, is to be held in connection with the annual exhibition and is open to all members, but only representatives, directors, and honorary members can vote. The directors are 7 in number—3 from Jutland, 1 from Fyn, 2 from Sjaelland and Bornholm, and 1 from Lolland-Falster. The president, vice-president, and secretary constitute the executive committee.

SOCIETY FOR THE PROMOTION OF POULTRY BREEDING.^a

Two new societies, after the pattern of the original one, sprang up in Copenhagen in 1880 and 1882, respectively. This was unfortunate and threatened to break up the country into small societies (as in Saxony, where 100 societies existed at this time without any central organization) and waste its energy in useless rivalry. Union was especially important now that they purposed to take the lead in this industry and distance all foreign competition. Consequently the leaders left no stone unturned in order to live in harmony, and a committee of two from each society undertook to see that they should not clash at any point. In 1889 the two Copenhagen societies combined, and in 1891 the Society for Poultry Breeding in Denmark and the Society for the Promotion of Poultry Breeding (Copenhagen) joined and adopted the name The Danish Poultry Society, with headquarters at Aarhus. The general government consisted of 5 directors—2 chosen by the Copenhagen branch and 3 by the Aarhus branch. One-third of the state aid was to go to the general government and the remainder to the two societies, in proportion to their membership. The one branch should not hold an exhibit in the country nor the other hold one in Copenhagen. Now all interests were harmonized and the work could go on unhindered.

^a For rules, see Appendix II, p. 476.

SOCIETY FOR PROFITABLE POULTRY BREEDING.^a

Now that poultry keeping had become remunerative a new tendency appeared. People began to consider more closely the profits of poultry raising and to look upon the breeding of fancy birds as a separate branch of the industry. A society representing this tendency came into existence in 1897 and grew so rapidly as to rival the older societies in membership. The name of this society is Society for Profitable Poultry Breeding. The real leader in this movement was J. Pedersen-Bjergaard, who edits the Poultry Yard, the paper of the society. Attempts to combine this society with the others under a common government have so far proved unsuccessful. The minister of agriculture favors a union among all the societies, in the hope that this will best subserve the general welfare.

In 1903 the societies had the following membership: Society for Poultry Breeding in Denmark, 3,700; Society for the Promotion of Poultry Breeding, 2,000; Society for Profitable Poultry Breeding, 3,000; total, 8,700.

DANISH COOPERATIVE EGG EXPORT SOCIETY.^b

The Cooperative Egg Export Society was founded at Vejle, in Jutland, in 1895, but has since 1900 been located at Copenhagen.

The real purpose of this society is to market the products of the poultry societies. Its work commences where the other societies leave off, and supplies an essential link necessary to complete their financial success. It works in harmony with them and attracts the same membership, although it is an independent organization. A great drawback to a successful export trade had been the fact that producers as well as dealers withheld their eggs for higher prices, and that in consequence they were often a month old when they reached England. The grocers and dealers themselves were the first to see the need of a reform, and as early as 1890 attempted, without success, to form an association to stop this practice. In order to hasten the transportation of eggs one of the poultry societies appealed to the ministry of the interior to have eggs considered perishable goods, but this was not granted till 1897.

How thorough and far-reaching the reforms of the Danish Cooperative Egg Society were appears from the fact that the dealers and grocers strongly opposed the new organization, as it went far beyond the plans contemplated by them, but the rapid growth of the society and the success of the enterprise, satisfying a long-felt need, was strong enough to overcome all opposition.

According to the most recent reports there are altogether some

^a For rules, see Appendix III, p. 478.

^b For rules, see Appendix IV, p. 479.

33,500 members distributed among 475 local societies or circuits. The conduct of all the affairs of the society is in the hands of a council of five directors, who also, on the basis of market quotations, fix the price of eggs paid to the members. Each circuit must have at least ten members. The general meeting, consisting of delegates from the circuits, prescribes a series of uniform by-laws for all the circuits, allowing only slight deviations to be made by the circuits.

The circuit pays the society half a krone (13.4 cents) for each member and one-half of all the fines collected. The circuit elects a local council of its own, hires an egg collector, supplies all the funds necessary to pay for the eggs and for defraying the expenses till the eggs are ready for shipment from the circuit. At this point the society takes charge, paying the expenses till the eggs are on board the ships for foreign export and deducting the costs from the general profits. At the close of the financial year, after settling all the accounts, the society pays one-half of the profits to the circuits and credits the remainder to the circuits. This sum is to be used to carry on the work, and can be paid over to the circuits only at the final dissolution of the society, unless in the judgment of the directors the amount exceeds the requirements of the business.

The government of the circuit, just as that of the society itself, is a directorate consisting of an uneven number of members and elected by the circuit. The duty of the directors is to look after the interests of the circuit, and to see that the eggs are delivered promptly and in the condition required. They hire the egg collector and the other employees of the circuit; they also fix the daily price paid for eggs by the collector.

Every circuit has a central station situated, if possible, on a through railway or steamship line connected with one of the shipping stations of the society. It has an office and rooms for storing and packing the eggs delivered by the members. It is the meeting place of the directors and members of the circuit.

Each circuit has an egg collector who gives satisfactory bonds for the honest discharge of his work. The collector goes from farm to farm on stated days and takes the eggs to the station in the evening. The farmers must not deliver eggs that are more than seven days old or that were laid before the last collection took place. The eggs must be clean and be stamped with the number of the member who furnishes them. The collector refuses dirty eggs, and stamps them to prevent their being washed and presented a second time. The eggs are bought by weight regardless of their size. The payment is in cash and at a price fixed by the directors of the circuit.

The cost of collecting the eggs is very low, and is paid by the circuit, while the remaining expenses are borne by the society and deducted from the payments to the circuits. The collector receives

generally 1.6 cents per 2.20 pounds (6 öre per kilogram) which, on an average of 16 eggs to the kilogram, amounts to 1.2 cents per dozen. The cost of transporting the eggs from the stations of the circuits to the steamer is on the average 2 öre per kilogram (0.53 cent per 2.20 pounds) or, at the same average of eggs per kilogram, 0.4 cent per dozen. The total expense, then, for the eggs from the time they are taken from the nests till they are placed on the steamer for foreign countries is a trifle over 1½ cents per dozen.

The directors of the circuits pay for the collecting and the packing. The cases are 0.50 m. wide and 0.75 m. long, with two compartments, and hold about 500 eggs. A case costs \$2 and lasts about 100 journeys. The packers place a layer of wood wool on the bottom of each compartment, and on this a cardboard case containing 50 eggs, each egg in a separate cell. Over this they lay another pad and another cardboard case, and so on, until there are five tiers of eggs. On top they place a heavier pad immediately under the lid.

The collector has charge of the stations and superintends the packing of the eggs. It is important for the successful management of the business that he be a man who is trusted and well known in the community. Another one of his duties is to make periodical inspections of the nests of the poultry yards.

The society has nine stations where the eggs are packed for foreign export. Copenhagen, which is also the headquarters of the society, and Ringsted are on the island of Zealand, Svendborg and Odense on Fyn, Rudkjøbing on Langeland, and Aalborg, Aarhus, Vejle, and Esbjerg in Jutland. Five of these—Copenhagen, Aalborg, Aarhus, Vejle, and Esbjerg—are also ports of shipment. Esbjerg, situated on the west coast of Jutland, and favorably located for the British trade, is, as might be expected, the principal port of shipment. In 1902 one-third of all the eggs exported passed through this port. All the exports from Esbjerg go to Great Britain.

On their arrival the cases are weighed before and after they are emptied. Women generally do the grading, testing, and packing. In grading they work behind long tables on which are six trays, or wooden frames, one tray for each size or grade. The frame, or tray, holds 60 or 120 eggs, and has a hole for each egg. Practice makes the sorters very expert. As a rule, they see at a glance to what grade an egg belongs, and by long practice they become so skillful that they can grade 120 eggs without being an ounce out of the way. As the trays are filled a man removes and weighs them. When a tray weighs too much or too little for its grade, large eggs are replaced by small ones, or vice versa, till the correct weight is obtained. Thereupon they are taken into a dark room to be tested.

The testing apparatus is a box, 8 by 30 inches at the bottom, 2 feet high, and widening upward. It is lined with mirrors, and has four

16-candle electric lights at equal distances along the bottom. The tray with the eggs, thick ends down, fits on top. While the bad eggs appear dark and cloudy, the light shines through the sound ones, giving them a clear pink color. The dark or suspicious eggs the tester breaks, but if they are found upon breaking to be sound, the person who supplied them is paid in full; otherwise he is fined according to the rules of the society. The packing stations are so well equipped for determining the freshness of the eggs and the system works so well that even attempts at fraud are rare.

Now it remains to stamp them with the trade-mark of the society and to pack them for export. The boxes used for this purpose are about 20 by 79 inches and 9 inches deep, made of light pine wood, and hold 1,440 eggs. They are nonreturnable. First the packers spread on the bottom a layer of long, clean rye straw. On this they pack a layer of eggs snugly together without anything between them. Over these is placed another layer of rye straw, then another layer of eggs, and so on until there are four layers of eggs, and then one substantial layer of straw on top. Then the lid is nailed down, and the trade-mark of the society, the grade, weight, and number of the eggs contained are affixed. The method of packing does not appear to be altogether uniform. Many stations use wood wool instead of straw.

After a consignment has been thoroughly examined, the officers of the society remit to the circuit a numbered receipt stating the current price per pound, the number and the weight of the eggs, as well as the number of spoiled or suspicious eggs.

Most of the Danish eggs go to England, and, as a rule, the eggs reach London in forty to fifty hours. The large English firms have agents in Denmark who generally buy the eggs free on board the ship. English dealers deduct 60 eggs per case for breakage.

The table below gives the price per great hundred (120 eggs) in London at four seasons of the year—the 22d of March, June, September, and December—or, where no quotation is given for this, the date the nearest before or after.

Prices of first-class Danish circuit eggs on the London market, 1900 to 1903.

[Per great hundred=120 eggs.]

Year.	Extra large.		Large.		Small.	
1900.						
March 19	\$1.82	to \$1.95	\$1.70	to \$1.76	\$1.18	to \$1.24
June 19	1.95	2.07	1.76	1.82	1.40	1.12
September 24	2.19	2.43	2.19	2.25	2.01	2.06
December 24	3.62	3.74	3.41	3.53	2.98	3.16
1901.						
March 23	1.70	1.82	1.18	1.70		
June 24	2.01	2.07	1.82	1.88	1.18	1.24
September 23	2.19	2.31	2.07	2.13	1.82	1.95
December 23	3.41	3.53	3.22	3.28	2.80	2.98

Prices of first-class Danish circuit eggs on the London market, 1900 to 1903—Continued.

Year.	Extra large.		Large.		Small.	
1902.						
March 24	\$1.70	\$1.82	\$1.58	\$1.64		
June 23	1.88	1.95	1.70	1.82	\$1.12	\$1.24
September 22	2.19	2.43	2.19	2.25	1.95	2.07
December 22	2.47	3.62	3.28	3.41	2.80	2.92
1903.						
March 20	1.70	1.76	1.18	1.24		
June 22	2.01	2.07	1.82	1.95	1.24	1.70
September						
December 21	3.40	3.52	3.16	3.28	2.79	3.03

COMPARATIVE MARKET PRICES OF EGGS IN LONDON.

[Per great hundred=120 eggs.]

On March 19, 1903.

French	\$1.58	to	\$2.31
Italian	1.52		1.82
Hungarian	1.34		1.45

On June 22, 1903.

French, extra	\$2.43	to	\$2.55
French, choice	2.25		2.31
French, ordinary	2.06		2.19
Danish, 18 pounds	2.06		
17 pounds	1.94		
16 pounds	1.76		
15 pounds	1.64		
14 pounds	1.51		
Italian, extra	1.94		2.06
Italian, choice	1.64		1.70
Italian, ordinary	1.45		1.57
Hungarian	1.15		1.51
Russian	1.03		1.45

On September 19, 1903.

French	\$2.00	to	\$2.91
Italian	1.94		2.43
Hungarian	1.34		1.94
Russian	1.39		1.82

On December 19, 1903.

French	\$3.03	to	\$3.65
Italian	2.67		3.22
Hungarian	1.76		2.43
Russian	1.70		2.36

OTHER EGG SOCIETIES.

There are two small societies exporting eggs—one at Nysted, with a membership of 700, and another at Gaverslund, with a membership of 300. Besides these, five bacon factories have egg-packing centers and

a total annual export of 6,000,000 pounds of eggs, valued at \$670,000, among which are: At Kalundborg, 750,000 pounds; Slagelse, 700,000 pounds; Esbjerg, 2,200,000 pounds. The Danish Cooperative Butter Factory also deals in eggs.

GREAT BRITAIN.

NUMBERS OF POULTRY.

The "Agricultural Returns" have not included statistics on poultry since 1885, and in consequence of this omission much definite information on this subject is now lacking. Persons, however, familiar with this industry have made estimates which may be more or less correct, but which can not take the place of official figures. The following are the last available figures for Great Britain:

Numbers of poultry in Great Britain, 1884 and 1885.

Kinds of fowls. ^a	1884.	1885.
Turkeys.....	500,770	474,583
Geese.....	888,313	885,310
Ducks.....	2,368,390	2,201,601
Chickens.....	12,303,539	12,401,533
Total.....	16,061,012	15,963,027

^a The numbers are exclusive of those kept in towns and by cottagers with less than a quarter of an acre of land.

The numbers of the different kinds of poultry for England alone in 1885 is shown below:

Turkeys	356,485
Geese	615,724
Ducks	1,736,788
Chickens	9,556,053

WHY EGG PRODUCTION HAS DECREASED.

The decline of British agriculture in the last century no doubt arrested the development of the poultry industry also. We may to some extent attribute the backward condition of this industry in Great Britain to the lack of a numerous class of small farmers devoted to intensive cultivation. The small holdings in England are comparatively few. Most of the agricultural land is in farms of from 100 to over 1,000 acres and this reduces the number of poultry runs. With the high price of land and grain the English could hardly expect to vie with foreign countries in the production of ordinary eggs. But their nearness to the great markets gives them an advantage in the sale of new-laid eggs—the line that is most profitable and in which the French alone could seriously compete. For this reason the improvement in the British poultry industry directly affects the French trade,

as appears from the fact that the French trade has declined as the English has developed. With a perfect system of collecting, packing, and shipping eggs—such, for example, as the Danes follow—the trade in new-laid eggs should be profitable. Better rates also could be obtained from the railway companies. Now the English complain that foreigners enjoy cheaper rates than localities through which this trade passes can obtain.

IMPORTATION OF EGGS.

The most striking feature in connection with this industry in England is the enormous importation from abroad. Already in the "fifties," when the annual imports did not yet exceed one million great hundreds, writers on this subject became alarmed and attempted to call the attention of the English to the growing importance of the egg trade. They expressed the hope that the reviving industry at home would soon supplant the foreign imports. After fifty years have passed, however, the imports have increased twentyfold and the revival has only begun.

It is a long time since England ceased to supply her own demand in poultry and eggs. As imported eggs could be bought more cheaply than they could be produced, the industry did not receive the attention it deserved. With the decline of agriculture in England and the growth of large cities and manufacturing centers, the imports have steadily increased. The table below shows the increase in number and value since 1871. The latter has increased fivefold and the former nearly sixfold in these years. With the growth of imports the average price per dozen has fallen from 18.4 cents to 16.2 cents.

Imports of eggs into the United Kingdom, 1871 to 1902.

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	<i>Dozens.</i>	<i>Dollars.</i>		<i>Dozens.</i>	<i>Dollars.</i>
1871.....	33,372,750	6,149,368	1888.....	93,899,390	15,004,332
1872.....	44,299,310	8,576,693	1889.....	94,325,030	15,220,426
1873.....	55,039,500	11,480,181	1890.....	102,912,460	16,686,284
1874.....	56,712,269	11,840,847	1891.....	106,283,140	17,059,622
1875.....	61,768,630	12,457,559	1892.....	111,394,190	18,466,995
1876.....	62,752,170	12,752,157	1893.....	110,459,860	18,860,836
1877.....	62,598,800	12,036,689	1894.....	118,769,680	18,426,170
1878.....	65,309,560	12,220,249	1895.....	127,225,860	19,482,770
1879.....	63,892,320	11,172,121	1896.....	132,450,011	20,364,628
1880.....	62,284,050	10,878,822	1897.....	140,317,540	21,202,401
1881.....	63,059,930	11,301,911	1898.....	144,246,010	21,690,560
1882.....	67,660,200	11,607,872	1899.....	161,747,560	24,548,582
1883.....	78,369,680	13,295,546	1900.....	168,820,780	26,308,406
1884.....	82,800,073	14,163,914	1901.....	170,717,767	26,745,150
1885.....	83,565,680	14,264,865	1902.....	189,667,950	30,702,575
1886.....	86,264,280	14,055,293	1903.....	198,488,940	32,204,545
1887.....	90,840,770	15,016,467			

POULTRY SOCIETIES.

In recent years the English have begun to organize poultry societies according to the Danish system. The National Poultry Organization Society came into existence in 1898 for the purpose of encouraging the poultry industry in the country and of establishing a system more in accordance with the requirements of modern conditions. The society has issued a series of leaflets to disseminate information about poultry and to give advice regarding the choice of breeds, the formation of branches and collecting depots, the methods of rearing, and marketing the produce. In May, 1903, there were in England eight branches and twenty-four collecting depots, with a membership of 2,217. At that time there was but one branch in Scotland and none in Wales.

PER CAPITA CONSUMPTION.

The Agricultural Statistics of the Board of Agriculture for 1902 prints a table giving the per capita consumption of imported eggs in the United Kingdom from 1882 to 1902, which is reproduced here. According to this the per capita consumption has more than doubled in the last twenty years. As Ireland is not an importer of foreign eggs, it should not be included in this table, and this would raise the per capita consumption for the rest of the Kingdom.

Per capita consumption of imported eggs in the United Kingdom, 1882 to 1902.

Year.	Number.	Year.	Number.	Year.	Number.
1882.....	23	1889.....	30	1896.....	40
1883.....	27	1890.....	33	1897.....	42
1884.....	28	1891.....	34	1898.....	43
1885.....	28	1892.....	35	1899.....	48
1886.....	29	1893.....	34	1900.....	49
1887.....	30	1894.....	37	1901.....	49
1888.....	31	1895.....	39	1902.....	54

IMPORTS OF POULTRY.

A glance at the census of 1885 shows that the stock of poultry in Great Britain can not feed the large population of the Kingdom; nor does the small surplus from Ireland suffice for this purpose. The imports into Great Britain have increased year by year—from \$1,712,463 in 1886 to \$5,850,934 in 1903. The largest imports before 1899 came, in order of importance, from France, Belgium, Russia, and Holland, and since that time from France, Belgium, Russia, and the United States. The imports from France have been large and steady, valued at \$989,870 in 1886 and \$1,241,699 in 1903. Except for the last year these are the largest from any single country. The exports from Belgium are in part reexports from Italy and elsewhere. Russian exports to Great Britain have gradually grown from \$88,891 in 1896 to \$1,577,169 in 1903, when they surpassed those of any other country.

In the last four years the imports of poultry from the United States have figured largely, rising from \$756,741 in 1900 to \$1,139,087 last year.

Values of poultry and game imported into the United Kingdom, 1886 to 1903.

1886.....	\$1, 712, 463
1887.....	1, 995, 722
1888.....	1, 963, 812
1889.....	2, 302, 794
1890.....	2, 422, 821
1891.....	2, 223, 888
1892.....	2, 839, 262
1893.....	2, 817, 504
1894.....	2, 340, 222
1895.....	2, 945, 011
1896.....	3, 433, 209
1897.....	3, 556, 073
1898.....	3, 102, 355
1899.....	3, 821, 633
1900.....	4, 915, 961
1901.....	4, 772, 854
1902.....	5, 153, 837
1903.....	5, 850, 934

IRELAND.

WORK OF THE CONGESTED DISTRICTS BOARD.

Ireland is a grain-producing country and seems always to have had a considerable number of poultry. From the annual census taken by the Royal Irish Constabulary and Metropolitan Police, it appears that the number of poultry has grown from 11,159,002 in 1870 to 15,276,128 in 1891 and to 18,153,714 in 1903. But an important change, which does not appear from these figures, is that the quality has been improved; that well-nigh the entire stock of poultry, which was not very productive, has been replaced by better breeds. This silent transformation has been brought about mainly by two organizations. Of course, in Ireland as in other countries, the individual poultry breeders have often done good work and thus contributed to the general progress, but an enumeration of these would lead us into greater detail than is the purpose of this article.

Passing by these individual poultry breeders, the organization that first entered the field was the "Congested Districts Board" appointed in 1891 to continue for twenty years and thereafter until Parliament shall otherwise determine. The board was to consist of ten members and its object was to improve the congested districts, which were defined as follows:

Where at the commencement of this act more than 20 per cent of the population of a county live in electoral divisions whose total ratable value divided by the number of the population gives a sum of less than £1 10s. for each individual, those divisions shall form a separate county known as "congested districts county."

Numbers of poultry in Ireland for a series of years.

Year.	Chickens.	Turkeys.	Geese.	Ducks.	Total. ^a
1871.....					11, 717, 182
1872.....					11, 737, 529
1873.....					11, 863, 155
1874.....					12, 068, 375
1875.....					12, 139, 138
1876.....					13, 618, 500
1877.....					13, 566, 083
1878.....					13, 711, 174
1879.....					13, 782, 835
1880.....					13, 430, 182
1881.....					13, 972, 426
1882 ^b					13, 998, 651
1889.....					14, 856, 517
1890.....					15, 408, 428
1891.....	9, 289, 925	982, 569	2, 117, 295	2, 876, 754	15, 276, 128
1892.....	9, 422, 946	950, 674	2, 115, 828	2, 846, 133	15, 335, 749
1893.....	9, 978, 278	1, 031, 928	2, 177, 227	2, 909, 252	16, 097, 461
1894.....	10, 248, 280	1, 011, 591	2, 082, 005	2, 838, 071	16, 180, 601
1895.....	10, 515, 291	1, 001, 818	2, 026, 343	2, 827, 044	16, 369, 525
1896.....	11, 339, 813	1, 090, 539	2, 142, 186	2, 973, 233	17, 537, 570
1897.....	11, 654, 561	1, 070, 705	2, 022, 725	2, 948, 969	17, 777, 248
1898.....	11, 641, 561	1, 070, 705	2, 022, 725	2, 948, 969	17, 683, 960
1899.....	12, 086, 584	1, 120, 464	2, 011, 286	3, 014, 607	18, 233, 520
1900.....	12, 403, 743	1, 108, 632	2, 007, 673	3, 027, 040	18, 547, 307
1901.....	12, 679, 913	1, 124, 795	1, 962, 161	3, 040, 897	18, 810, 717
1902.....	12, 681, 227	1, 038, 472	1, 836, 195	2, 947, 813	18, 504, 324
1903.....	12, 529, 473	959, 787	1, 768, 613	2, 895, 841	18, 153, 714

^aThe totals in this table do not always agree exactly with the sum of the other columns, as they are later and revised figures.

^b Does not include the poultry of counties Clare and Limerick.

In the first report of the board submitted in 1892 eighty-four congested districts are given, covering an area of 3,608,569 acres and including a population of 549,516. Roughly speaking, these districts are situated in the northwestern, western, and southwestern parts of the island, including the counties of Donegal, Leitrim, Sligo, Roscommon, Mayo, Galway, Clare, Kerry, and Cork. Parliament placed the income from certain sums of money at the disposal of the board and empowered it to take such steps as it thought proper for improving the congested districts in connection with agriculture, forestry, live stock, poultry, etc. As practically all the inhabitants of congested districts in Ireland are in possession of small plots of ground, the development of agriculture and the improvement of live stock and poultry are of primary importance. We shall deal only with the last subject—an industry, perhaps, which more than any other affected the poorest class of “occupiers.” The intention of the board is not so much to provide relief work as permanently and materially to develop the trade and industries of the localities where it operates; and it was recognized that in point of importance the poultry industry comes next

only to the dairying industry, and that as an industry for small farmers or cottagers it is second to no other.

EFFORTS TO IMPROVE THE BREEDS OF POULTRY.

The board soon found that the poultry was of inferior breeds and they set about an improvement. As the income at the disposal of the board, if divided among the families in question, would have amounted to only a few shillings each, it seemed that some plan should be devised which would afford instruction and opportunities rather than money for those who were willing to struggle to improve their condition. Working under new conditions, it was not an easy matter to hit upon the best plan at the start.

Early in 1892 the board began to distribute purebred cockerels to the cottagers in exchange for their male birds. During the first year 581 cockerels of the Langshan, Black Minorca, White Leghorn, and Plymouth Rock breeds were bought and distributed. The attempt was made, so far as practicable, to confine one breed to each district. The Black Minorcas and Plymouth Rocks showed the best results, so these breeds only were sent out the following year.

The board tried to show the country folk the benefit of keeping good breeds of laying and table poultry, but unfortunately, as in the case of cattle and horses, the practice of the people too generally was to send all the good birds to market, keeping none for breeding purposes. They did not at first see the value of the new and imported breeds, for, neglected and left to themselves, these breeds often failed to thrive or even to do as well as the old Irish hen. Disease broke out among them and many died when they came into the hands of people who did not know how to take care of the more highly cultivated breeds.

In 1893 the board employed an expert to select and buy the breeds suited to the different localities, so that the 1,200 cockerels and pullets distributed this year fared somewhat better. In places where disease ravaged severely, the Indian Runner duck, as being better suited to the localities than chickens, was introduced in great numbers; they proved more prolific layers than the chickens and continued free from the disease.

As the plan of distributing birds proved rather expensive and not altogether successful, the board in 1893 adopted the plan of exchanging the eggs of purebred chickens for those of the common kinds, paying the distributor 1d. for each egg he exchanged. As centers of distribution, one or two farmers in a district obtained from the board from 20 to 30 pullets and a suitable number of cocks on condition that they exchange the eggs of the purebred fowls for an equal number of the common kind during the months of February, March, April, and May. As compensation, they received from the board 1d. for each

egg so given out. In 1901 the board reduced the compensation to a half-penny per egg; and in case of poultry farms to be established in the future it allowed the farmers to exchange the eggs of purebred chickens at their full value in common eggs or to sell them at a rate not to exceed a maximum price fixed by the board. If they complied with the conditions of the management they received in addition each year a cash bonus.

These farms gradually increased in number—from 7 in 1892 to 30 in 1895, 65 in 1898, and 107 in 1901—and the number of eggs exchanged rose from some 50,000 during the sitting season, about 1897, to 130,535 in 1901.

Some of the farms, however, engaged partly or altogether in raising ducks to supply damp and exposed places where the imported breeds of chickens were not hardy enough. Thus, in 1891, 53 farms distributed eggs of fowls and ducks, 17 distributed eggs of fowls only, and 37 of ducks only. From June, 1896, down to the present time the board has employed an expert to visit the farms at regular intervals and superintend all the operations connected with this industry. It is worthy of note that this expert was a lady. The sisters, also, in several convents became interested and eagerly took up the work of teaching the peasantry better methods of poultry raising.

ESTABLISHMENT OF PLANT FOR FATTENING POULTRY.

In 1897 the board established at Carrigart, County Donegal, a plant for fattening poultry. It was not successful at first and soon closed on account of unsatisfactory management, but afterwards under expert guidance it proved useful and even showed a handsome annual profit. Although its principal business was to buy poultry from the neighboring farmers and cottagers, and to fatten and export it to Scotland and England, it also distributed eggs in the neighborhood. Thus in 1899 and 1900 the plant marketed 8,274 fowls, 218 ducks, 186 geese, 192 turkeys, and distributed 3,000 eggs of purebred poultry.

Although much of this work lacked the thoroughness and system it afterwards acquired under the cooperative societies, it contributed its share to the final success of the poultry industry in Ireland.

COOPERATION ESTABLISHED.

The second impetus to the poultry development in Ireland came from the cooperative movement. This may be said to have had its beginning at the Congress at Glasgow, when the Cooperative Union of Great Britain decided to spend a sum of money to promote cooperation in Ireland. This union sent an agent to Munster to organize cooperative dairy societies in order that they might serve as a practical illustration of the benefits of cooperation. The experiment was so successful that as early as 1893 there were thirty cooperative dairy societies.

THE IRISH AGRICULTURAL ORGANIZATION SOCIETY.

In the following year the Irish Agricultural Organization Society was formed with the general object of promoting agricultural organizations for any purpose that might seem beneficial, and to counsel and advise those engaged in agricultural pursuits. Men of all creeds and parties joined and undertook to supply funds for a five years' experiment. The society rapidly grew in public favor and has been the means of bringing many advantages within the reach of the poorer members of the rural community. Its popularity was such that when the first term expired it was voted to continue the work for another five years, and it sends out special experts to organize the several kinds of societies—dairy, agricultural, rural banks, home industries, poultry, bee keepers, etc.

Besides carrying on the work of practical organization, the society prints and sends out numerous leaflets, and publishes a weekly paper and an annual report.

The funds necessary for doing this work for Ireland's rural industries have come from the annual fees and direct contributions of the affiliated societies and from subscriptions and donations of wealthy friends of the movement on both sides of the Atlantic. The sum of about \$150,000 that has been expended by the society in the last seven years is estimated to have resulted in an added gain of about \$5,000,000 to the industry of the associated farmers,^a besides developing the energies and business capacity of the people. Not the least of the benefits arising from cooperation was the improvement of the Irish themselves; they learned to work together and exchange ideas among themselves; they discussed and familiarized themselves with business and agricultural methods, and in this way became better farmers, better business men, and better citizens. While the politicians declaimed against landlordism and saw the salvation of the country in political measures only, the friends of cooperation showed that the abolition of rents could not make their farms more productive nor raise the price of their produce. Foreign competition has rendered the position of Ireland precarious even in the home markets. Modern principles had revolutionized the methods of production elsewhere, but the Irish remained stationary and clung to antiquated ways. The only thing to do was to adopt up-to-date methods and try to regain their lost advantages. Their attention was called to the remarkably prosperous condition of Denmark, where cooperation had had full scope. Their proximity to the great markets should inspire the Irish with hope of even greater success than the Danes enjoyed.

^a Annual report, Irish Agricultural Organization Society, 1902, Appendix III.

ESTABLISHMENT AND GROWTH OF POULTRY SOCIETIES.

Soon other forms of cooperation were taken up, and in 1898 the first cooperative poultry societies were organized, and several agricultural societies went into the same line of work. In the beginning they wisely decided to confine their operations to the sale of eggs and not to take up for the time the more difficult work of fattening and preparing poultry for the market. In the course of time they found that a society could work to greater advantage on an extended scale, and so the societies that were started in 1902 have, as a rule, a wider area, a larger capital, a larger membership, and a larger business than most of the societies formed prior to that time.

The fifty-six cooperative societies for the raising of poultry and the sale of eggs are situated in the following nineteen counties:

County.	Number of societies.	County.	Number of societies.
Donegal	4	Kings	1
Londonderry	3	Wicklow	2
Antrim	3	Waterford	1
Tyrone.....	4	Cork.....	5
Fermanagh	3	Kerry.....	1
Sligo	11	Limerick	1
Mayo	2	Kilkenny.....	1
Galway	4	Clare	1
Cavan.....	2	Total	56
Westmeath.....	4		
Monaghan	3		

These societies are formed for the purpose of improving the breeds of chickens and to enable the farmers to get a remunerative price for their products by finding openings for the sale of eggs and poultry. The shares are 5s. each, and the farmer must take one share for every 25 chickens in his possession.

The growth of these societies in number and volume of business appears from the following table:

Year.	Number of societies.	Value of business.	Year.	Number of societies.	Value of business.
1898.....	3	.....	1901	29	\$81,120
1899.....	16	\$38,698	1902	31	145,576
1900.....	21	46,110	1903	56	.....

The volume of business grew regularly from \$38,698 in 1899 to \$145,576 in 1902. Thus it appears that the business of the societies in 1902 was twice as large as that of 1901, more than three times as large as that of 1900, and nearly four times as large as that of 1899. This business refers only to societies registered as "poultry societies"

and leaves out of account the trade in eggs and poultry done by agricultural or dairy societies. The business of one of these societies alone—that of Windgap—amounted in 1902 to \$6,326.

It is encouraging to note that the membership as well as the business of the poultry societies has grown from year to year. In 1902 the 31 societies had a membership of 5,906.

ORGANIZATION AND METHODS OF PROCEDURE.

The Irish Agricultural Organization Society has adopted the following mode of procedure in establishing local poultry societies: First of all the organizers distribute leaflets showing the advantages of cooperation and urging the farmers to form organizations. These leaflets are sometimes in the form of questions and answers, and often lighted up with quaint flashes of Irish humor.

LOCATION OF CENTRAL STATION.

When a society has been formed the Irish Agricultural Organization Society sends an expert to give advice as to where to locate the central station. It is essential that this be within easy access of a railway and at the same time central and convenient to the district embraced by the society. If possible it should either be a seaport town or a station on a main line of railway, from which through rate can be had to markets in Great Britain.

SUITABLE BUILDINGS.

If old buildings are not available a two-story building is erected, with an earth floor, about 40 by 20 feet. The material is sometimes stone or brick, but more often galvanized iron sheets lined with thin, matched boarding. The upper story is divided into two rooms—a small one, 20 by 10 feet, to be used for a committee room, and a large storeroom for wood, straw, wood wool, and other packing materials. On the lower floor a small space is reserved for the office, and in the remainder the eggs are tested, crated, and packed, and the poultry killed, plucked, dressed, and packed.

In addition to the main building, there are usually smaller sheds for housing the horses and sheltering the poultry that are fattened. The society must necessarily have one or more horses, with complete sets of harness and light vans for collecting the eggs and poultry and conveying them to the railway station or steamboat; an oil cover for each van; several sets of scales and weights; testing and grading machines; a set of plain carpenter's tools; a set of stencils and branding instruments; and a set of account books.

BRANCH DEPOTS FOR COLLECTING EGGS.

In connection with the central station there should be established a certain number of branches, or collecting depots. Five or six will

probably be sufficient to begin with. They ought to be within carting distance of the central station, as local rates on railways for short distances are high. All that is needed at local depots is a set of scales and weights. Here the eggs are placed in large boxes with pasteboard compartments and forwarded to the central station.

METHODS OF COLLECTING.

A man who is thoroughly familiar with the neighborhood is employed to take charge of a horse and van. He works seventy hours a week and collects twice a week on each round. He blows a horn at frequent and regular intervals to give warning of his approach, in order that the eggs may be in readiness when he arrives. When the lanes and byways are badly kept and it is difficult to drive to the cottages, children usually bring the eggs to the main road. The collector weighs the eggs and pays for them at the current price for the day, and hands the producer a duplicate statement of the transaction as a check to his claim on the dividends at the end of the year. The collector must be careful not to accept dirty eggs or he will have to bear the loss in deductions made from his wages.

As the collectors carry no testing apparatus with them, they can judge of the age of the eggs only by the appearance of the shells, but by experience they soon become so expert in this that a stale or bad egg seldom escapes their notice. Each egg, however, has the number of the producer stamped on the end, so that a bad egg can always be traced to the one who sells it. In the evening the collector surrenders at the station with his load of eggs the register of his purchases and the balance of his cash for the day, and takes home with him a new supply of boxes, straw, and cash, and a new register, so as to be able to make an early start the next day. At the station the eggs are weighed again at the earliest opportunity in order to ascertain whether the weight agrees with the sum paid out, and the register of each individual sale is credited to the members on the books of the society.

THE SORTING OF EGGS.

The eggs are, in the first place, graded, or sorted, into three classes, according as they weigh $13\frac{1}{2}$, 15, or 17 pounds per great hundred (10 dozens). As the breeds improve the eggs become larger. The new system of buying eggs by weight instead of by the dozen has brought about this rational change. At Mallow, where there is a large cooperative poultry society, 50 per cent of the eggs in 1899 weighed $13\frac{1}{2}$ pounds, 30 per cent weighed 15 pounds, and 20 per cent weighed 17 pounds per great hundred. Four years later 30 per cent weighed 14 pounds, 30 per cent weighed 16 pounds, and 20 per cent weighed 17 pounds. It is obvious that a dozen eggs of large size, if sold by weight, bring more money and entitle the producer to a larger

share in the annual dividends than the same number of small ones. So long as small eggs brought the same price as large ones there was no inducement to market large ones, but as soon as the trade put a premium on large-sized eggs it became profitable to have better breeds of fowls for egg production. The demand for large eggs is now so great that a great hundred of 17 pounds will sometimes command fancy prices, and often run, especially in the winter, as high as \$1 above eggs weighing 14 pounds per great hundred.

The eggs are graded and placed with the thick end up on perforated trays ready for the testing machine. This testing apparatus consists merely of a tin-lined box, at the bottom of which is a light. As the trays are placed on top the light shines through the fresh eggs, while the old and stale ones appear dark and cloudy. At this time the stamp of the society is placed on each egg.

METHODS OF PACKING AND SHIPPING.

The British trade requires that the eggs shall be shipped in non-returnable cases, each case holding three, six, or twelve long hundreds.^a Still, packers are advised not to put over six hundred in a box and to have a partition in the middle, for cases that are too heavy often break during shipment. The cheapest and lightest kinds of woods, therefore, are used for cases, such as deal, poplar, or lime. The boards are sawed at local mills to the exact dimensions required for boxes and stored at the stations. The cases are nailed together as they are needed. For packing, either straw or wood wool is used. The best straw is that of oats, but barley straw is sometimes used. The wood wool is made from one of the soft, resinous kinds of deal or fir. Before using, the rosin is removed and the packing material is made clean and dry so as not to injure or impart any odor to the eggs. The eggs are packed in layers, with straw or wood wool between. Each case contains but one grade of eggs.

On the lids are placed the following marks: "Irish eggs," "With care," "This side up," "Keep dry," and on the ends are branded the number of long hundreds and the net weight above the words "New-laid Irish eggs." The case is now ready to be turned over to the railway or steamship company for shipment to Great Britain.

TRANSFORMATION DUE TO POULTRY SOCIETIES.

CONDITIONS BEFORE ORGANIZATION OF POULTRY SOCIETIES.

Before the advent of the poultry societies the poultry industry in Ireland was in no better condition than in many other countries where the chickens are left to shift for themselves. The farmers were satisfied to sell small eggs and scrawny spring chickens to the local dealers

^a A long hundred is used in Ireland for great hundred=120 eggs.

at low prices. As little or no attention was given to the matter of having good breeds, and the chickens were often kept until they were ten years old, they did not lay over one hundred eggs a year. Not hatched at the right season nor properly cared for, they did not lay in winter when the price was high. When the price was rising the housewife held the eggs as long as she dared for the sake of the extra gain and then sold them to what are called "higglers," or, in Ireland, "egglers." The dealers held them still longer and sent them dirty and unselected to the British market in musty straw and in cases that had crossed the Channel more than once before with various contents. No wonder many an Irishman was puzzled to know what became of those eggs when they had reached this well-seasoned state. The situation became such that the Irish eggs, compared with eggs from the Continent, appeared in an unfavorable light and brought the lowest price on the British market.

CHANGE IN METHODS OF PACKING DEMANDED.

In 1898 matters came to a crisis, when the merchants of Liverpool and Glasgow, who had before handled Irish eggs, gave notice by circular that after a certain date they would buy only fresh eggs packed in dry, clean straw or wood wool and in nonreturnable cases, such as were used in the continental trade. The exporters, who could only gain by the change, sided with the merchants, but the farmers' wives continued as before to keep their eggs until they had a goodly number on hand. This bad habit came near ruining an industry which otherwise proved profitable to the country. The merchants refused to yield, as they could get what they needed from a half dozen countries, and had given the Irish this opportunity in order that they might compete with the foreign imports.

PRESENT CONDITION OF THE POULTRY INDUSTRY.

What the poultry business or the egg trade of Ireland has been during the last years can only be estimated, as there are as yet no available statistics on the subject. From the figures already given we see that the egg trade of Ireland does not rank with that of Denmark, but that a great improvement has been accomplished is evident, and the interest shown in the work as well as the nearness of the country to the great markets justifies the belief that it is destined to grow.

INSTRUCTION IN POULTRY KEEPING.

In the winter of 1902 courses of instruction in the practical management of poultry societies were given at Dunboe, County Kerry, and at Dervock, County Antrim. These were preliminary courses, and intended to satisfy the urgent demand for managers of newly formed poultry societies. The following year the department of agriculture

and technical instruction for Ireland gave a special course of instruction in poultry keeping at the Albert Agricultural College, Glasnevin, County Dublin. This course was designed for young men and women wishing to obtain a practical training in poultry keeping or to qualify themselves as itinerant instructors in poultry keeping. In order to facilitate this instruction, poultry runs, on which are represented the pure breeds of fowl, have been provided. Furthermore, the department has announced that for the year 1903-04 it is prepared to approve of the appointment of at least one instructor for each county of Ireland, provided a suitable one can be obtained. It outlines at the same time the general plan, limits the pay, and prescribes the duties of the instructors. This scheme of the department is published herewith in full:

SCHEME FOR ENCOURAGING IMPROVEMENT IN THE POULTRY-KEEPING INDUSTRY, 1903-04.

1. The department is prepared, provided a suitable instructor in poultry keeping can be obtained, to approve of the appointment of at least one such person for each county in Ireland.

2. The department will, as far as possible, assist county committees in obtaining an instructor by supplying the names of persons qualified for the post.

3. Unless in exceptional circumstances the remuneration of the instructor shall not exceed £2 [\$9.73] per week, in addition to expenses of locomotion, which include second-class railway fare, car hire when necessary, or a bicycle allowance of 2d. [4 cents] per mile in lieu thereof.

4. The appointment of the instructor shall be determinable at any time by four weeks' notice in writing on either side.

5. It will be the duty of the instructor to deliver courses of lectures on poultry keeping, including the selection of breeds, the hatching and rearing of chickens, the feeding and housing of poultry, and the marketing of the produce; to visit poultry runs and give such advice as may be desired by poultry keepers; to inspect the egg-distribution stations referred to in clause 12; to report to the department and to the county committee regarding the progress of his or her work as may be required, and generally to give his or her whole time towards promoting improvement in poultry keeping in the county.

6. For this purpose the county should be divided into circuits, each comprising not less than five centers. The instructor should work for at least four weeks in each circuit, and deliver one lecture per week at each center during that time. The instructor will, when invited to do so, visit, either on the day of the lecture or on the following day, any of the poultry runs in the neighborhood, and give such information on poultry keeping as the circumstances of the case may suggest.

The county committee alone are responsible for the selection of the centers and the arrangement of lectures. No work of this nature should be undertaken by the instructor, though it is desirable that he or she should be consulted.

7. It will be the duty of the county committee to select centers at which the lectures will be given and to appoint a local committee, with an honorary secretary, at each center, who should select the school and arrange for the hiring, lighting, and warming of the room in which the lectures will be delivered.

It will also be the duty of the county committee to undertake the responsibility of seeing that the instructor's time is fully and usefully employed.

The county committee shall keep a separate account of all expenditure under this scheme, and shall furnish detailed statements of such expenditure as shall from time to time be required by the department.

8. Lectures should be arranged, whenever possible, to be given in schoolrooms, in the evenings, and should be held in rural centers only. Towns and larger villages should be avoided, as experience has shown that the greatest success attends those lectures which are given in the rural parts of the county, especially when the lectures are delivered in districts where the greatest number of those interested in poultry keeping is to be found. The local committee at each center should be responsible for appointing a representative chairman for each lecture, as well as for the distribution of the short syllabus, which will be prepared by the lecturer as soon as appointed. The local committee should undertake to have posters, which will be supplied by the secretary of the county committee, effectively displayed throughout the circuit. Each lecture should be followed by a discussion, during which farmers and others interested in poultry keeping will be invited to ask questions relative to their business.

9. The lectures should commence early in autumn and be continued until the end of the hatching season. If employed during the summer months, the instructor should, during that season, visit poultry runs and inspect egg-distribution stations.

DISTRIBUTION OF SITTINGS OF EGGS OF PURE BREEDS.

Hens and ducks.

10. In counties where instruction in poultry keeping has been provided the department are prepared to sanction a limited number of premiums of £5 [\$24.33] each, being awarded to selected applicants who distribute at least sixty sittings of eggs; those who distribute less will be paid in proportion to the number distributed. When the demand for sittings is not pressing the owner may set eggs for his own use, but such sittings will not count towards a premium. Applicants must agree to comply with the following conditions:

(1) To keep one pure breed of hens only. In exceptional cases the department may approve of more than one pure breed being kept, provided they are satisfied that the selected person, houses, runs, birds, etc., are suitable.

(2) To sell or destroy any existing fowl on the farm of which the instructor or the department may disapprove, and not to bring on the farm fowl of any description without the approval of the instructor or of the department.

(3) To keep no male birds on the farm other than those used for stock purposes of the breed or breeds of fowl approved of.

(4) When a premium is claimed for hens alone, to keep not less than 30 or more than 60 of the selected breed. If the premium is claimed in respect of hens and ducks, to keep not less than 20 or more than 60 hens or pullets of the selected breed, and not less than 10 or more than 30 ducks of the selected breed. One cock or cockerel must be kept for every 10 hens or pullets, and 1 drake for every 6 ducks.

(5) To provide proper housing where such does not already exist, and in case of two breeds being kept to provide a separate run for each to the satisfaction of the instructor or the department. The run for any one flock of 30 birds will require to be at least 300 square yards.

(6) To feed and care for the birds in such a manner and in such a way as the instructor and the department may require.

(7) To supply sittings of eggs from these birds to any person in the county at 1s. [24 cents] per dozen, and to replace infertile eggs that are returned within one month from the date on which they were sent out.

In special cases the department may sanction an increase in the price of eggs, provided the county committee show sufficient reasons for so doing.

(8) To stamp all eggs given out with a stamp provided for the purpose by the county committee.

(9) To keep in a special book, provided by the county committee, an accurate record of all eggs laid and distributed. This book must be sent to the secretary of the county committee or to the department when asked for by either of these bodies. The books should be returned to the secretary of the county committee at the end of the distributing season, which will commence on January 1 and terminate on May 31.

(10) To permit the instructor or the department to inspect the birds at any time. Any infringement of the above rules may entail the cancellation of the premium.

11. An additional grant of 50 per cent of the actual cost, but in no case exceeding £2 [\$9.73], may be made to the selected persons who provide themselves with portable wooden fowl houses approved by the department. This will only apply to persons that are taking up the scheme in 1903-04 for the first time.

Turkeys.

12. Premiums of £3 [\$14.60] each may be offered to persons who are prepared to comply with the following conditions:

(1) To keep one or more purebred American Bronze stock turkey cocks for the service of turkey hens, the property of any persons residing in the county, at a fee of 6d. [12 cents] per service. Each cock must serve 20 hens, exclusive of the owner's. If a smaller number are served, the premium will be proportionately reduced. The turkey cock will be required to be at least 12 months old and not less than 23 pounds in weight.

(2) To provide proper housing accommodation and to feed and care for the bird or birds in such a manner as the instructor or the department may require.

(3) To keep in a special book, provided by the county committee, an accurate record of services. This book must be sent to the secretary of the county committee or to the department when required, but otherwise returned to the secretary of the county committee at the end of the season, which will commence on January 1 and terminate on May 31.

(4) To permit the instructor or the department to inspect the birds at any time.

Any infringement of the above rules may entail the cancellation of the premium.

13. An applicant will be eligible for only one premium either for hens or for hens and ducks combined, but he will, in addition, be eligible to hold a premium for turkeys. No premium, however, will be given for ducks alone.

One of the following breeds of hens and ducks must be selected:

Laying breeds.

Minorcas. White Leghorns. Brown Leghorns.

General-purpose breeds.

Houdans. Plymouth Rocks. Orpingtons. Faverolles.

Ducks.

Aylesbury. Rouen. Pekin. Indian Runner.

14. As soon as the instructor has been appointed and the number of premiums proposed to be awarded has been approved of by the department, the county committee shall invite applications from persons in the county who already possess, or are willing to purchase, hens of approved pure breeds of fowls or ducks, or to keep one or more pure-bred turkey cocks, as above, and who are prepared to comply with the above conditions. When these applications have been received the county instructor in poultry keeping will, as soon as possible, inspect and report to the county committee as to the number of suitable applicants. The names of the selected applicants, with full particulars as to breeds, number of birds, and housing, should then be submitted for the approval of the department, who may thereupon further inspect the selected farms and submit a list of those of which they approve to the county committee for their final selection.

15. The department will not consider applications from a county in respect of premiums under this scheme later than December 1, 1903.

On account of the difficulty of procuring stock birds of pure breeds late in the season, it is recommended that county committees who intend to adopt this scheme should, if possible, have all arrangements completed prior to January 1, 1904.

16. Not later than June 10 the selected applicants for premiums should forward to the secretary of the county committee the record books referred to in clauses 10 (9) and 12, accompanied by a statutory declaration certifying that the entries in

these books are correct and that all the conditions of this scheme have been complied with.

As soon as the department is satisfied as to the fulfillment of the conditions of this scheme, the secretary of the county committee will be notified that payment may be made by the committee of the premiums or part premiums payable under this scheme.

Forms for the declaration required by this clause may be had on application to the secretary of the county committee.

17. No action shall be taken by the county committee towards putting this scheme, or any part thereof, into operation until the sanction of the department has been obtained in writing.

FRANCE.

GEOGRAPHICAL DISTRIBUTION OF POULTRY.

The earliest census of French poultry was taken in 1862 and has been followed by those of 1882 and 1892. In this period of thirty years the number of chickens has risen successively from 42,851,790 (1862) to 47,601,284 (1882) and to 54,102,985 (1892). The census of 1902 is not yet issued, but at the same percentage of increase the number of chickens for that year should amount to over 60,000,000. The census is taken near the end of the year (November 30) and gives what may be considered a constant figure, rising gradually from year to year. If taken earlier in the year, the census would no doubt show greater fluctuations. By the end of November the spring and summer stock are presumably sold off and the remainder is kept mainly for breeding and laying purposes.

Number and value of French poultry as given by the census returns of 1862, 1882, and 1892.

Kind of poultry.	1862.		1882.		1892.	
	Number.	Value.	Number.	Value.	Number.	Value.
Chickens	42,851,790	\$10,917,967	47,601,284	\$17,623,257	54,102,985	\$19,265,256
Geese	3,881,557	2,794,294	3,938,405	3,609,031	3,519,741	3,075,654
Ducks	3,610,841	1,219,651	4,184,250	1,799,888	3,683,727	1,525,904
Turkeys	1,760,506	1,726,070	2,095,697	2,214,867	1,968,142	1,974,588
Guinea fowls			271,637	166,961	300,509	200,911

This industry is distributed more generally than any other over the entire country. While the mountain tracts of the south and south-east are rather scantily supplied, poultry is grown considerably in the eastern and northern Departments.^a As might be expected, owing to the nearness of the great markets of London and Paris, poultry abounds in the Departments between Paris and the English Channel.

The Departments of France best supplied with poultry seem, on the one hand, to lie on a broad strip extending from Manche and the neigh-

^a See *Géographie Agricole de la France et du Monde*, by J. Du Plessis de Grenédan, p. 215 ff.

boring Departments south to the base of the Pyrenees. Another strip commences in the southeast and winds about Paris on the south and west as far as the Belgian frontier, taking in the Departments of Eure, Seine-Inférieure, Oise, Aisne, Somme, Pas-de-Calais, and Nord. The greatest number per acre exists in the Department of Seine, in which the capital (Paris) is located.

The following table will give some idea of the number of poultry per acre in different parts of the country in 1892:

	Per acre.		Per acre.
Seine	3. 26	Sarthe	0. 47
Nord	1. 14	Mayenne	.44
Somme	1. 07	Pas-de-Calais.....	.425
Saône-et-Loire.....	.97	Pyénées-Orientales	.36
Rhin (Haut).....	.61	Var	.26
Ille-et-Vilaine.....	.51	Alpes-Maritimes.....	.18

In the course of time France has developed several excellent breeds of chickens which are considered eminently adapted to the country. The most famous breeds are La Bresse, Houdan, Crèveœur, Flèche, and Faverolles. La Bresse breed abounds at Bourg in Ain and Louhans in Saône-et-Loire; Houdans at Hurepoix; Crèveœurs in the valley of the Auge; and La Flèche in Maine. The last named furnish the well-known poulards of Le Mans.

Ducks are found in great numbers in the western marshes, in the southwestern plains along the ocean, and particularly in Perigord, in the Charentes, and upper Poitou.

Geese are found in great numbers in Armagnac, lower Auvergne, le Bourbonnais, and La Bresse. Many are also raised in Poitou, where their livers are used in manufacturing pâté de foie gras (a pie made of fat goose livers).

Turkeys thrive on higher ground away from the sea. They are found in considerable numbers on the plains of the Garonne, beyond Bordelais, as well as in middle and eastern France.

THE CONDITIONS OF PRODUCTION.

France contains a great number of farms and small holdings. The census of 1892 states that there are 5,702,752 small holdings or farms. The great advantage of this system of small holdings is that the land is in the hands of the maximum number of proprietors and is able to support a very large rural population. The small size of the holdings compels the peasants to resort to intensive cultivation, and thus to make the most out of their land. Where an Englishman would emigrate to America or to the colonies and go into farming on a large scale, the French peasant would win a living by this intensive cultivation and thus be able to stay in his own country. The necessity of obtaining good results from small holdings of land has developed a large class of skilled farmers—what we might call agricultural arti-

sans. These conditions have produced the qualities of patience and skill and an almost fastidious care in the tilling of their small farms. The work is often laborious and not very remunerative, but they are able in this way to remain in France.

The average number of chickens per holding or farm is 9.48. Leaving out of account the State lands and the woods and forests, the cultivated area amounts to 34,720,200 hectares (85,797,614 acres), and gives 1.56 chickens per hectare, or 0.63 per acre. The number of persons who owned or rented the land they tilled was 4,814,870 in 1892. They raised an average of 11.24 chickens.

France is an agricultural country and produces an abundance of grain. The soil and climate are favorable to the keeping of poultry and the production of eggs. The subdivision of the land into numerous farms and small holdings has a tendency to enlarge the industry, and the nearness to London and Paris insures ready markets.

The care of the poultry is mostly in the hands of the farmer's wife. She looks to the comfort of her fowls and feeds them scraps and warm mashes. The equal of the French peasant wife in industry and skillful management is not found in any other country. The large amount of money paid by Great Britain for French butter and eggs in excess of those of other nations is a direct tribute to the skill and industry of the French ménagères. They fear no rivalry from the English, as the English ladies will never condescend to this necessity; but they feel some anxiety as to whether they can keep the market from the Danes and the Russians.

The French eggs are large and brown and have an excellent flavor, and, being sorted, packed, and presented in the most attractive way, they bring the highest price in the English market. (See table on p. 426.) The largest eggs come from Picardy. Besides the extra size of the Picard eggs—being about as large as ordinary turkey eggs—they are considered to be of finer flavor and quality than those from other parts. The Normandy eggs come next.

Poultry raising is an important industry in Brittany. The cost of food, which consists principally of skim milk and barley meal, is not great. In fattening a simple device is used, it being a circular fattening pen of several tiers on a central pivot and an automatic "crammer." A woman is usually employed at this work at a cost of about 30 cents per day.

The eggs and poultry are collected at the local fairs and markets, and even at the farmhouses, by the dealer's cart as it goes on its weekly round. The eggs are packed for shipment in long, flat cases holding 60 dozens and which are easy to handle.

The Breton peasant himself is not a consumer of eggs, but he holds them for the collector, who in turn sells them to the local merchant, and finally the eggs find their way to St. Malo. In 1896 there were

exported from Cherbourg, Granville, Barfleur, and St. Malo 8,830 tons of eggs and 267 tons of fowls.

METHOD OF COLLECTING EGGS AT ST. MALO.

An important point in the egg industry is to bring the eggs to market in a fresh state. As a rule, a farmer does not find it worth his while to make an extra trip to town to deliver eggs, and if he does not happen to go to town the eggs remain at home to become stale, or are pickled for the winter, and in either case are sold at a reduced price. A British consul reports a simple plan of marketing eggs which is followed by the people in the vicinity of St. Malo, France. Women and boys collect the eggs at the farmhouses and cottages, pay for them in ready money, and take them to the nearest collector, who gives them an additional cent a dozen for their work. He either packs them himself or sends them to the packer at St. Malo. By this method several people make a living with little or no outlay, \$5 to pay for the eggs and a light wooden crate, carried by means of a webbing over the shoulders like a knapsack, being all they require. By this method the eggs arrive fresh on the market and bring a higher price than when they are kept long and delivered in a stale condition. The farmers and cottagers know that it is to the interest of the woman or boy to come at fixed dates, and they are glad to be saved all expense and risk of sale. Any man well known in the vicinity can start this method of collection by employing old men and boys. If a collector purchases even 50 dozen eggs in a day, his pay is 50 cents, and he is thus insured a pretty fair living.

PRODUCTION AND CONSUMPTION OF POULTRY.

The census taken on November 30, 1892, gives the number of chickens as 54,102,985. The stock was at this time near the minimum number after the slaughter of the summer stock. What proportion this number is to the total when the flocks were most numerous there are no data to determine. The *Statistique Agricole, Résultats Généraux de l'Enquête Décennale de 1892*, page 315, suggests the following method: The writer assumes that the total stock of the country remains nearly constant from year to year, and that the average life of a chicken is one year and a half. Dividing the census total by one and a half he obtains 36,068,650 as the number of chickens consumed annually. In other words, the number killed in each year is equivalent to the new crop of the season. Thus a farmer having 150 chickens would on the average dispose of 100 a year. The writer does not state on what observations he bases his method.

At present the proportion of poultry consumed during the year is greater than it was in 1892, but that is no doubt due to the rise in the

price of meat. The exports of poultry give only a small fraction of the total product of the poultry yard. To this we must add not only the number that is sold in the towns and cities, but also that consumed in the country itself by the producers. But what the percentage of each one of these items may be is not easy to ascertain.

THE POSSIBILITIES OF IMPROVEMENT.

Although the poultry industry is probably better organized in France than in most other countries, yet much could be done to improve existing conditions. More effective organization will probably be introduced, this being necessary in order to compete successfully with a country like Denmark, which has most thorough organization. France has natural advantages in the climate, soil, aptitude of the people for this work, and proximity to great markets, both domestic and foreign.

The Danish cooperative system has been introduced into France only to a limited extent, but many are urging its adoption.

IMPORTS AND EXPORTS OF POULTRY.

The imports and exports of live poultry are not large, both amounting to only about half a million dollars a year. The trade in dead poultry, on the other hand, is more important and amounts to over \$2,000,000 a year. The exports exceed the imports five or six times.

Ireland supplies only her own demands. Denmark is obliged to import for her own use, and the same is the case with the other neighboring countries. Of the more remote countries Russia is the largest exporter to England, the value of the exports amounting to \$800,529 in 1898. Canada and Italy also ship large quantities. The quality of this poultry is not the best, and the freezing or cold storage resorted to in transporting them to great distances does not improve their flavor. Under these conditions it would not be as profitable for the French to compete in the same grade of exports. Cheap trade is not the most profitable. The extra expense entailed in producing a fine quality is trifling, while it often doubles the price in the market. The total exports of Russian poultry amount to a large sum, but the net gain is probably small. The French exports are not so large, but the profits are large. The Mans and Bresse pullets, owing to their superior quality, make the industry profitable. For this reason they have no ambition to vie with Russia in the quantity of their exports, and only seek to develop this high-class trade—this, *commerce de luxe*—which they now possess and which is so profitable. They devote their skill to producing poultry of exquisite quality and flavor, and the great success of the French at the annual poultry exhibitions held in the Agricultural Hall, London, is evidence of the merit of their products.

Its nearness to London gives France an advantage over its competitors. Most of the poultry and eggs that are exported come from the north of France, which has excellent facilities for shipping into England. For example, the Western Railway of France sends five days in the week the so-called "butter train," which gathers butter, eggs, and poultry along the route and arrives at Cherbourg at 5 in the evening. Steamers leave at 11.30 in the night and the train arrives in London in the early morning. Thus eggs collected in France may be had in London the next morning.

The east counties of England used to produce a great many turkeys, but the consumption there has now exceeded the production, and England has recourse to France, Italy, and Canada. France ships two kinds of turkeys—the Sologne and the Normandy. The meat of the latter is more tender, has a better flavor, and brings a somewhat higher price in the market. French turkeys are slaughtered after fasting twenty-four hours, and then packed in clean, returnable cases; they reach the market in perfect condition.

Goose is the traditional Christmas bird of the English, and at this joyous season the English consume them in enormous quantities. The supply comes almost altogether from France, and during Christmas week London alone consumes from 100,000 to 150,000 French geese. The Department of Sarthe occupies the first place in the production of geese. These are of medium weight and much relished. The huge Toulouse geese are not in so great demand. In recent years the tendency has been to raise geese weighing from 9 to 12 pounds. English buyers complain that they can not in England or Ireland obtain 500 geese of uniform weight, while they can buy 5,000 in France and have them delivered on a certain date. Two hundred English geese would vary in weight from 6 to 16 pounds.

FRENCH EXPORTS OF EGGS.

The French exports of eggs (see pp. 453, 454) show a considerable decline during the "nineties," and several explanations of this fact have been offered. Some have assumed that with the introduction of the cooperative methods eggs of better quality have been produced elsewhere, and that these have forced a great number of the French eggs out of the market and taken their place. That the eggs of other countries have replaced the French eggs on some markets does not prove the superiority of the former is easily shown by the fact that the French eggs have now, as well as heretofore, brought the highest prices in the foreign markets. They are large, brown, and of excellent flavor, being in especial favor with the wealthy. The great quantity of cheaper eggs that enter the English markets is consumed by a very large class of people who can not afford to use the French product.

The cooperative method has done a great deal to increase the production and quality of eggs, but, after all deductions are made, such methods can not produce a favorable climate or soil or deprive the French peasant's wife of her native industry and skill. Others have supposed that the Italian exports to southern France have been replaced by French eggs, and that many of the Italian eggs that formerly went to Great Britain by way of France have in recent years passed through Belgium. The statistics, however, do not bear out this statement, as the imports from Italy into France have grown slightly instead of decreasing. When we examine the table of exports of French eggs, we see that the decline is not confined to one year or even to recent years, but covers a period of some twenty years. The explanation of the decline in 1897 then must be taken, not as a separate instance, but in connection with a cause of long duration, with a regular decline that has operated since about 1880.

In order the better to understand the course that the export trade of French eggs has taken, it will be important to discuss the rise of this trade.

The exportation of French eggs seems to have commenced about 1830—fifty years before any other country seriously thought of this source of income. England has been the chief market and France has the advantage of being near by. As early as 1838 the exports of French eggs to all countries had a value of 5,000,000 francs. During the five years of 1838 to 1842 the average annual exports of French eggs amounted to 5,600,000 francs. The highest point was reached in 1875, when they amounted to 34,417,000 kilos and were valued at 46,463,000 francs, or 1.35 francs (26 cents) per kilo. This amount is about twice that of 1897. The great bulk goes to England, only a mere fraction being sent to other countries.

Previous to 1880, for some forty or fifty years, France had undisputed supremacy in the egg markets of England. Other countries of large production exported elsewhere. For instance, Italy sent her eggs to Germany, France, and Switzerland; Russia exported to Germany. An idea of what these countries were exporting in 1880 may be had from the following table:

Exports of eggs from leading countries in 1880.

Country of export.	Quantity.		Value.
		<i>Dozens.</i>	<i>Dollars.</i>
France.....kilos..	21, 413, 932	α 35, 689, 887	5, 885, 044
Italy .....quintals..	250, 969	41, 828, 162	8, 072, 835
Russia.....stook..	127, 047, 000	10, 587, 250	929, 060
Belgium.....			816, 969
Denmark .....scores..	1, 992, 055	3, 320, 092	520, 488

α About.

France first found Italy as a competitor in the English market in 1883, and since that date large quantities of Italian eggs reach England by way of Belgium. Russia appears to have entered this market about 1883, when she sent 67,460 dozens.

WHY FRANCE HAD LED IN EGG EXPORTS.

The preponderance of French eggs in the English market is to some extent due to the fact already stated, that the country is very favorably located as regards the English market, but it is due principally to the fact that the French were the first to organize this industry. Other countries were geographically as near England then as now, and could have taken much of the trade had the industry been better developed among them. So long, however, as the methods of transportation were comparatively undeveloped, it was hardly possible to ship eggs from Russia, Italy, or the Balkan States, but Ireland, Belgium, Holland, Denmark, and Germany were as favorably situated as many parts of France.

The situation was that the British market demanded a good and clean supply, and the French had the skill and aptitude to satisfy that demand. The English were the best customers for eggs in Europe, and during the decade between 1880 and 1890 the different European countries, one by one, entered this market with ever-increasing imports; but France continued easily as first. In the next decade the struggle became more acute. Denmark had in the meanwhile perfected a cooperative system for this industry, and other countries had adopted similar improvements. With improved methods of collecting, packing, and transporting, a larger area was taken in and could compete in the best markets. This stimulated local prices and at the same time increased the exports.

In the twenty years following 1880 Denmark increased her egg exports to England sixfold; Russia between 1888 and 1901 increased hers threefold. In the face of this competition it is not to be expected that France could make a successful stand for any length of time. The Danish exports to England are increasing from year to year, as are those from other continental lands, but up to almost the close of the century France was the largest exporter of eggs to England, and she held the trade of London almost exclusively. In 1897 the French exports were surpassed by Russia in volume though not in value. The Belgian and German exports are also larger, but as those exports in reality come from other countries, such as Russia, Austria-Hungary, the Balkan States, and Italy, they should not be considered as the product of the countries exporting them. They are, in fact, reexports from the countries named.

Thus we see that a constantly growing improvement in the methods of collecting, packing, and shipping, and a better knowledge of the

principles of the cooperative system have enlarged the area of the competitive trade and resulted in an enormous increase in the exports of eggs from the agricultural countries.

The development of the industry in countries like Denmark, Russia, and Hungary brings about large exports from those places, and naturally so; but it is difficult to understand why the French exports are decreasing, especially since the demand of the English market is constantly growing. Since 1880, for instance, the imports into the United Kingdom have grown threefold—from 62,284,050 dozens to 189,667,950 dozens in 1902. One of the reasons for this decline of French exports, it has been stated, is that the consumption by the people of France has increased more rapidly than production. Better prices are now obtained in Paris than could be obtained in London. Moreover, this trade is not so profitable as it has been—not so profitable as other kinds of exports.

The following table shows the imports and exports of eggs for the years of 1877 to 1902, inclusive. The table also shows the exporting country:

Imports and exports of French eggs, 1877 to 1902.^a

[From Tableau Décennal du Commerce de la France, 1877-1896; Tableau Général du Commerce, 1896-1902.]

IMPORTS.

From—	1877.	1878.	1879.	1880.	1881.	1882.
	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>
Germany	311,765	457,314	445,667	624,639	514,423	868,357
Belgium	1,597,518	1,761,648	1,877,121	2,055,292	2,365,041	2,158,495
Austria	195,017	89,480	350,679	346,846	97,441	270,467
Italy	3,789,918	3,551,625	4,532,169	3,966,376	4,135,631	4,497,606
Other countries	172,642	447,313	277,093	163,865	139,217	324,093
Total quantity	6,066,860	7,482,729	7,482,729	7,157,018	7,251,756	8,119,018
Value	\$1,639,266	\$1,643,390	\$1,949,625	\$1,864,761	\$1,889,445	\$2,193,759

From—	1883.	1884.	1885.	1886.	1887.
	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>
Germany	1,049,397	1,326,839	861,208	937,114	493,070
Belgium	2,871,593	2,793,331	3,168,574	3,011,938	3,362,547
Austria	316,889	179,138	326,347	236,762	135,431
Italy	4,087,722	3,925,376	4,163,064	4,565,486	3,858,552
Turkey					299,122
Other countries	191,991	306,293	938,917	304,473	551,820
Total quantity	8,517,592	8,530,977	9,098,110	9,145,773	8,700,542
Value	\$2,383,648	\$2,387,394	\$2,370,513	\$2,206,418	\$2,015,045

^a In France it is estimated that, on an average, 20 eggs equal 1 kilogram = 2.20 pounds.

Imports and exports of French eggs, 1877 to 1902—Continued.

IMPORTS—Continued.

From—	1888.	1889.	1890.	1891.	1892.
	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>
Germany	775,421	724,143	932,471	873,425	556,885
Belgium	3,251,998	2,827,718	3,523,323	3,898,042	3,082,140
Austria	297,514	645,583	561,128	618,792	134,446
Italy	2,020,298	1,122,749	996,534	1,003,389	1,387,451
Turkey	482,897	1,102,211	1,904,688	1,852,110	928,192
Other countries	933,625	1,191,125	1,299,023	1,347,622	396,634
Total quantity	7,761,753	7,613,529	9,217,167	9,593,380	6,485,748
Value	\$1,797,622	\$1,763,293	\$2,134,696	\$1,646,374	\$1,152,110

From—	1893.	1894.	1895.	1896.	1897.
	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>
Russia					2,513,794
Germany	833,845	1,035,661	384,826	517,661	346,559
Belgium	3,038,887	3,718,348	3,679,927	3,967,524	4,306,976
Austria	387,171	637,909	421,641	469,296	436,400
Italy	1,505,405	2,980,369	1,756,962	1,788,236	2,240,077
Turkey	599,692	1,419,990	1,648,891	1,708,513	1,827,072
Egypt					152,039
Tripoli					129,300
Other countries	276,693	1,071,519	1,410,667	1,817,012	145,773
Total quantity	6,641,693	10,863,796	9,302,914	10,268,242	12,097,990
Value	\$1,299,793	\$2,044,295	\$1,540,507	\$2,009,516	\$2,294,751

From—	1898.	1899.	1900.	1901.	1902.
	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>
Russia	2,199,097	2,562,282	3,506,087	3,728,292	4,306,348
Germany	1,348,769	862,699	808,062	960,044	1,444,488
Belgium	5,229,882	5,249,193	4,905,463	4,827,306	5,137,094
Austria	534,618	289,884	228,310	472,832	1,008,127
Italy	2,453,542	2,942,981	2,368,502	2,373,188	2,645,862
Turkey	2,007,358	2,034,499	2,649,254	3,249,930	4,494,952
Egypt	312,270	267,096	543,267	208,542	154,406
Tripoli	103,919				
Other countries	355,016	212,708	289,942	491,122	980,534
Total quantity	14,544,471	14,421,342	15,298,887	16,311,256	20,171,811
Value	\$2,977,754	\$3,082,804	\$3,408,579	\$3,560,470	\$4,251,330

Imports and exports of French eggs, 1877 to 1902—Continued.

EXPORTS.

To—	1877.	1878.	1879.	1880.	1881.	1882.
	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>
England	26,194,976	25,619,930	22,886,698	20,786,472	20,442,753	18,948,871
Germany	192,881	197,308	174,742	149,187	143,003	126,195
Belgium	429,571	234,383	236,521	121,030	153,372	182,318
Spain	15,790	50,211	227,860	40,860	14,198	26,392
Switzerland	237,942	243,366	240,292	272,659	265,061	268,379
Other countries	51,375	48,737	37,295	43,724	34,048	58,993
Total quantity	27,122,035	26,393,735	23,803,408	21,413,932	21,052,435	19,611,148
Value	\$7,328,374	\$6,876,940	\$4,363,859	\$5,786,044	\$5,688,368	\$5,488,180

To—	1883.	1884.	1885.	1886.	1887.
	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>
England	20,180,963	19,944,154	20,294,977	20,472,314	21,968,988
Germany	108,196	103,174	102,908	96,741	.....
Belgium	194,911	262,655	372,704	271,809	227,131
Spain	412,172	170,458	255,723	187,605	208,407
Switzerland	274,326	311,838	330,706	312,181	377,120
Other countries	168,309	80,670	109,235	102,917	213,406
Total quantity	21,338,877	20,872,949	21,466,253	21,443,567	22,995,052
Value	\$5,971,685	\$5,841,295	\$5,593,032	\$5,173,261	\$5,325,654

To—	1888.	1889.	1890.	1891.	1892.
	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>
England	12,368,557	20,657,282	21,098,520	22,286,231	22,313,928
Belgium	80,791	120,172	150,887	211,049	141,258
Spain	784,414	977,503	861,933	951,676	415,795
Switzerland	345,517	333,795	352,493	368,265	353,618
Other countries	203,510	194,067	215,646	199,499	358,630
Total quantity	19,782,789	22,282,819	22,679,479	24,016,720	23,583,236
Value	\$4,581,694	\$5,160,701	\$5,252,567	\$4,121,644	\$4,189,260

To—	1893.	1894.	1895.	1896.	1897.
	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>
England	24,500,582	12,755,098	16,999,013	21,467,453	17,126,299
Germany .....	.....	.....	.....	.....	84,733
Belgium	56,434	41,147	49,730	46,769	40,230
Spain	229,283	685	6,534	1,392	.....
Switzerland	326,952	194,755	234,753	329,871	294,817
Italy .....	.....	.....	.....	.....	4,492
Other countries	160,178	201,153	247,726	518,627	62,168
French vessels .....	.....	.....	.....	.....	147,117
Total quantity	25,273,429	13,192,838	17,537,756	22,364,114	17,759,856
Value	\$5,706,993	\$2,879,772	\$3,564,181	\$4,309,368	\$3,341,961

Imports and exports of French eggs, 1877 to 1902—Continued.

EXPORTS—Continued.

To—	1898.	1899.	1900.	1901.	1902.
	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>
England.....	12,440,617	12,183,691	12,343,336	10,998,333	9,497,574
Germany.....	96,601	93,428	110,160	128,673	126,808
Belgium.....	17,944	14,250	39,512	29,467	37,086
Switzerland.....	228,658	202,333	270,629	286,344	238,455
Italy.....	5,456	1,610	.....	3,222	295
Other countries.....	48,189	56,346	52,200	50,779	71,057
French vessels.....	146,052	163,277	179,941	438,040	331,643
Total quantity.....	12,983,517	12,714,935	12,995,778	11,934,858	10,302,918
Value.....	\$2,638,627	\$2,698,890	\$2,895,545	\$2,784,844	\$2,481,602

LIVE AND DEAD POULTRY.

French imports and exports of live and dead poultry, 1877 to 1903.

LIVE POULTRY.

Year.	Imports.		Exports.	
	Quantity.	Value.	Quantity.	Value.
	<i>Kilograms.</i>	<i>Dollars.</i>	<i>Kilograms.</i>	<i>Dollars.</i>
1877.....	.....	865,742	.....	687,392
1878.....	.....	845,198	.....	676,377
1879.....	.....	1,021,258	.....	773,066
1880.....	.....	971,925	.....	756,773
1881.....	3,129,842	1,208,119	3,370,207	1,300,881
1882.....	3,345,279	1,291,285	3,512,973	1,356,008
1883.....	2,666,409	1,029,233	3,735,734	1,441,993
1884.....	2,653,664	998,706	2,829,344	1,064,824
1885.....	2,814,942	1,059,403	4,294,998	1,616,422
1886.....	2,806,534	1,056,239	3,014,436	1,134,483
1887.....	2,837,146	1,040,381	3,494,092	1,281,384
1888.....	2,215,512	816,588	3,091,818	1,192,442
1889.....	1,915,371	776,300	2,400,465	972,909
1890.....	1,950,120	809,202	2,338,884	970,520
1891.....	1,890,297	802,619	2,349,198	997,470
1892 ^a	933,866	306,401	1,256,326	412,201
1893.....	868,668	267,255	1,142,611	352,838
1894.....	1,247,093	385,102	776,962	254,921
1895.....	1,219,226	341,301	809,622	242,198
1896.....	1,185,316	320,272	688,321	199,269
1897.....	1,227,518	324,568	534,617	151,976
1898.....	1,276,421	357,207	493,806	149,722
1899.....	1,337,956	361,516	703,843	204,663
1900.....	1,276,317	361,104	570,228	171,385
1901.....	1,143,985	324,560	508,180	153,984
1902.....	1,167,476	333,478	1,503,940	439,035
1903 ^b	1,027,400	293,550	496,300	151,312

^a Previous to 1892 game and turtles were included with poultry.^b Preliminary figures.

French imports and exports of live and dead poultry, 1877 to 1903—Continued.

DEAD POULTRY.

Year.	Imports.		Exports.	
	Quantity.	Value.	Quantity.	Value.
	<i>Kilograms.</i>	<i>Dollars.</i>	<i>Kilograms.</i>	<i>Dollars.</i>
1877.....	2,557,208	1,115,403	2,512,409	1,095,862
1878.....	2,899,842	1,315,223	2,563,101	1,162,494
1879.....	3,486,000	1,749,275	2,924,015	1,467,271
1880.....	3,450,389	1,598,220	3,616,355	1,675,096
1881.....	3,325,359	1,476,127	2,640,978	1,172,330
1882.....	3,851,565	1,724,577	2,881,078	1,290,032
1883.....	3,484,489	1,546,765	2,511,312	1,114,771
1884.....	3,712,071	1,576,145	2,610,208	1,108,294
1885.....	3,859,841	1,638,888	2,503,523	1,062,996
1886.....	3,457,008	1,467,846	2,712,100	1,151,558
1887.....	3,732,536	1,548,816	3,362,688	1,395,847
1888.....	3,425,638	1,487,583	3,236,557	1,405,475
1889.....	3,407,741	1,545,581	3,545,584	1,608,100
1890.....	3,442,483	1,594,558	3,897,435	1,805,292
1891.....	3,194,302	1,510,426	3,769,755	1,782,529
1892 ^a	844,576	391,208	3,957,251	1,871,186
1893.....	746,009	331,153	4,319,823	1,959,256
1894.....	984,954	437,221	3,296,624	1,558,832
1895.....	936,060	379,385	3,159,324	1,371,936
1896.....	901,841	348,111	5,115,062	2,122,495
1897.....	928,226	349,338	3,790,999	1,536,492
1898.....	942,029	372,713	4,118,838	1,748,859
1899.....	951,442	367,257	4,510,979	1,871,831
1900.....	939,643	380,837	4,653,833	2,020,927
1901.....	954,699	386,440	4,751,328	2,063,264
1902.....	489,626	149,307	4,560,570	1,980,428
1903 ^b	917,500	178,911	5,053,900	2,194,603

^a Previous to 1892 game and turtles were included with poultry.^b Preliminary figures.

PÂTE DE FOIE GRAS.

French imports and exports of pâté de foie gras, 1892 to 1903.

Year.	Imports.		Exports.	
	Quantity.	Value.	Quantity.	Value.
	<i>Pounds.</i>	<i>Dollars.</i>	<i>Pounds.</i>	<i>Dollars.</i>
1892.....	79,657	69,735	201,470	176,375
1893.....	101,182	88,579	248,974	217,963
1894.....	101,185	88,581	225,822	197,694
1895.....	92,385	80,879	214,951	188,177
1896.....	92,807	81,247	254,201	222,539
1897.....	90,638	79,348	208,520	182,547
1898.....	83,182	72,821	196,574	172,090
1899.....	74,793	65,477	212,878	186,363
1900.....	74,244	64,997	222,501	212,157
1901.....	65,904	57,695	204,433	178,969
1902.....	46,720	40,901	204,990	179,457
1903 ^a	26,400	50,952	122,100	235,653

^a Preliminary figures.

THE CONSUMPTION OF EGGS IN PARIS.

The number of eggs consumed in a large city like London or Paris is a question that has attracted some attention in recent years. London does not publish any satisfactory data on this subject; Paris, however, gives full and extensive information, and, being the largest city on the Continent, it will perhaps serve a useful purpose for comparison. Although the amount of eggs consumed will no doubt vary to some extent in different cities and the statistics for one can not be applied with accuracy to another, yet it is true that correct information in regard to one city of the first rank, such as Paris, will serve as a check to the wild guesswork often found in periodicals.

CITY AND MARKET REGULATIONS.

The city government levies a small tax on all eggs that enter the city limits, and from the records of this transaction it becomes possible to ascertain the total receipts of eggs in Paris.^a This tax, or octroi, as it is called, amounts to 81 cents per 100 kilos. About one-third of the eggs, both foreign and domestic, go to private dealers in the city. The remainder is taken by the Halles Centrales (Central Market), where the sale is subject to municipal regulations. The market fee for eggs is 20 cents per 100 kilos. The common package (colis) for French eggs is a wicker basket containing 1,000, while the long foreign cases hold 440 more. As the consignments usually contain some spoiled and small eggs, there is a board of inspectors appointed by the prefect of police to ascertain the number and condition of the eggs.

The cost of counting 1,000 eggs is about 5 cents; of testing, about 12 cents; and of passing through the ring, or grading, about 3 cents. Inspectors make no charge, however, for grading if there are fewer than ten small eggs in a consignment. An egg passing through a ring having a diameter of 38 mm. (about 1½ inches) is considered small. The inspectors act independently of buyers and sellers, and the police seize all eggs that are unfit for consumption. The number so seized is about 1 in every 50. The cost of counting and testing is borne by the purchaser when the loss falls below 10 in the count and 15 eggs in the test, otherwise the seller makes good the loss. The commission men charge 3 per cent for handling the eggs; they sell about 40 per cent by auction and 60 per cent by contract.

An ordinance of April 23, 1897, forbids the importation of merchandise not coming directly from the places of shipment or production. This has had the effect of eliminating preserved or limer eggs, which were bought up when they were abundant and preserved and resold at times when the supply was scarce. The items of preserved eggs given in the official reports before this date have not appeared since.

^a *Annuaire statistique de la Ville de Paris.*

THE SOURCES OF SUPPLY.

Nearly all the receipts of eggs in the Halles Centrales are domestic. Only about one one-fifteenth is foreign. As the foreign eggs are smaller, requiring from 25 to 30 to make a kilogram, they bring from \$1.54 to \$1.93 less per 1,000 than French eggs. The table below gives the domestic and foreign sources of the supply of the market in 1897:

Sources of supply of eggs for the Paris market for 1897.

	Kilograms.
France:	
West—Normandy, Brittany.....	4, 555, 301
Lyons—Burgundy, Bourbonnais	1, 346, 234
North—Picardy	1, 452, 982
East—Brie, Champagne.....	737, 300
Orleans—Beauce, Orne, Châtellerault, Nivernais, Vendée, Midi.....	6, 503, 600
Paris—Private parties.....	372, 626
Preserved—South and west	204, 800
Foreign:	
Austria-Hungary	57, 980
Egypt	56, 459
Germany	209, 680
Russia.....	708, 144
Spain.....	5, 100
Tunis	217, 020
Turkey	23, 100
Total	16, 450, 326

The average price for 1,000 eggs in 1897 was \$16.81. The average price per kilogram for the same year was 27.6 cents. A kilogram represents about 15 large, 17 medium, or 22 small eggs. As the different grades do not enter in the same proportion into the total receipts, the official estimate is 20 eggs to the kilogram.

TOTAL RECEIPTS AT PARIS.

The total supply of Paris was 20,566,873 kilograms in 1885, 22,324,103 kilograms in 1890, 24,589,962 kilograms in 1895, and 30,732,964 kilograms in 1900. This last figure should be discounted somewhat, as the increase is beyond the normal and was due to the occurrence of the world's exposition in that year. We see from these figures that there is a normal increase of about half a million a year. The home production supplies nearly all the demand. In the late fall and winter, when French eggs are more scarce than at any other time, foreign eggs make up the deficiency, but seldom appear on the market during the summer season. The duty on eggs is \$1.93 (general tariff) or \$1.16 (special tariff) per 100 kilograms; a few eggs come in at the general tariff of \$1.93, while the great mass enter at the conventional rate of \$1.16 per 100 kilograms. The records of the port of Paris give the amount of foreign eggs subject to tariff. From about

1,000,000 kilograms in 1890 it had grown to 4,000,000 kilograms in 1900. Foreign eggs, as a rule, are small, requiring from 25 to 30 to the kilogram, as stated above, and they bring from \$1.54 to \$1.93 less per 1,000 than the domestic. They also come, as a rule, by slow freight and are from three to eight days old when they arrive.

At first the imports seem to have come from a few near-by countries, but as the years went by they were shipped from greater and still greater distances. About 1890 Austria-Hungary was the only country exporting to Paris. Soon Russia, Germany, and Italy came in. Egypt appeared for the first time in 1896 and Tunis and Turkey in the following year. Russia has gradually outstripped the others. The seizures by the police in the Central Market since 1892 average 30,529 kilograms and the reshipments 992,111 kilograms. It should be observed, however, that the reshipments have in the same period decreased from about 1,215,000 to 684,100 kilograms. Therefore, after deducting the seizures by the police and the reshipments, the per capita consumption in 1891 was 180.6; in 1896 it was 193.6; and in 1900 it was 221. As already stated, some deduction should be made for the exposition year of 1900.

The table below shows for the year of 1897, by months, the total receipts of eggs at Paris and also the amount of these that went to the Central Market. The difference between the total receipts and those that went to the Central Market are the eggs that went to private dealers:

Receipts of eggs at Paris in 1897, by months.

Month.	Total receipts at Paris.	Receipts of foreign origin.	Receipts at Halles Centrales (Central Market).		
			Of domestic origin.	Of foreign origin.	Total.
	<i>Kilograms</i>	<i>Kilograms</i>	<i>Kilograms</i>	<i>Kilograms</i>	<i>Kilograms</i>
January	1,534,809	.....	1,138,687	118,100	1,256,787
February	2,222,594	.....	1,538,648	10,430	1,549,078
March	3,553,158	.....	2,238,455	6,700	2,245,155
April	3,472,453	.....	1,883,573	.....	1,883,573
May	2,552,925	.....	1,533,123	.....	1,533,123
June	2,099,699	.....	1,320,893	.....	1,320,893
July	2,103,781	.....	1,277,035	.....	1,277,035
August	1,730,659	.....	1,045,766	3,700	1,049,466
September	1,695,713	.....	842,599	126,260	968,859
October	1,873,658	.....	784,636	356,176	1,140,712
November	1,675,375	.....	757,100	290,048	1,047,148
December	2,013,818	.....	812,428	366,069	1,178,497
Total	26,528,642	2,820,500	15,172,843	1,277,483	16,450,326

Table showing maximum and minimum prices per 1,000 eggs of the several grades at the Central Market, Paris, by months.

Month.	Extra size (15 per kilogram).		Medium size (17 per kilogram).		Small size (22 per kilogram).	
	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.
1897.						
January	\$25.56	\$22.10	\$21.09	\$18.65	\$16.90	\$13.27
February	23.47	20.86	19.17	16.71	15.81	12.99
March	18.67	16.36	15.37	13.24	12.21	9.61
April	18.23	15.91	15.22	13.24	11.56	8.95
May	17.12	15.29	13.84	11.74	9.91	8.39
June	18.09	16.58	14.47	12.13	11.05	8.59
July	19.70	17.47	15.97	13.60	11.66	9.12
August	22.42	19.47	18.05	15.24	14.10	10.42
September	23.88	20.41	17.67	15.88	13.79	9.95
October	28.18	24.75	21.81	17.37	14.75	10.75
November	30.72	26.66	23.10	18.10	15.22	12.47
December	30.05	26.08	22.85	18.03	15.68	12.81
Average	23.01	20.16	18.22	15.33	13.56	10.61
1900.						
January	28.13	24.95	21.42	18.83	16.10	12.79
February	24.59	21.81	19.09	16.71	14.01	11.14
March	19.84	17.58	15.55	13.55	11.63	9.08
April	18.83	16.86	14.86	12.81	11.11	9.43
May	19.37	17.34	15.41	13.47	11.55	9.10
June	21.09	18.24	16.09	13.67	11.56	9.09
July	21.94	18.96	16.65	14.27	12.16	9.75
August	25.37	21.23	18.07	15.90	13.40	10.24
September	25.01	22.06	18.76	15.69	12.28	9.40
October	28.82	25.05	22.45	19.30	15.07	12.35
November	31.61	26.14	22.88	18.99	15.42	11.19
December	32.04	27.17	22.52	18.82	15.47	11.93
Average	24.76	21.45	18.65	16.00	13.31	10.46

Table showing the imports of eggs, both domestic and foreign, into Paris for a series of years.

Year.	Eggs of domestic origin.	Eggs of foreign origin.	Total.	Reshipments (about).
	Kilograms.	Kilograms.	Kilograms.	Kilograms.
1885			20,566,873	
1886			20,721,599	1,009,100
1887			21,405,044	909,100
1888	20,739,985	729,900	21,469,885	900,000
1889	21,610,372	969,700	22,780,072	1,200,000
1890	21,176,203	1,147,900	22,324,103	1,110,000
1891			23,250,509	
1892			23,432,947	1,215,000
1893	22,378,265	1,170,900	23,549,165	1,110,000
1894	22,194,896	2,283,700	24,478,596	1,140,000
1895	23,035,264	1,554,700	24,589,962	1,120,000
1896	23,200,602	2,468,500	25,669,102	1,135,900
1897	23,708,142	2,820,500	26,528,642	901,900
1898	23,675,556	3,239,400	26,914,956	863,600
1899	25,236,622	4,006,300	27,242,922	771,900
1900	26,602,544	4,129,700	30,732,244	684,100
1901		5,219,500		
1902		7,219,100		

The following table shows what disposition is made of these eggs. The Central Market (Halles Centrales) alone makes a separate showing of the domestic and foreign produce:

Distribution and price of eggs received at Paris for a series of years.

Year.	Central market.		Private dealers.	Seized by police.	Price per kilo-gram.	Price per 1,000 eggs.
	Of domestic origin.	Of foreign origin.				
	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Kilograms.</i>	<i>Francs.</i>	<i>Francs.</i>
1885			4,580,284		1.36	
1886			5,588,776			
1887			6,157,895			
1888			6,273,788	37,031		
1889	15,499,645	502,894	6,777,533	36,657		
1890	14,544,590	573,690	7,305,823	35,586		
1891	15,288,861	441,832	7,519,815			
1892	15,741,065	290,344	7,401,538	32,743		
1893	15,416,031	632,965	7,500,169	33,108		
1894	15,082,752	1,318,946	8,076,898	30,624	1.33	81.69
1895	15,447,440	541,200	8,601,324	30,638	1.43	87.21
1896	15,637,814	930,200	9,101,088	28,081	1.41	85.05
1897	15,172,843	1,277,483	10,078,316	28,719	1.43	87.12
1898	14,058,199	1,955,376	10,901,381	30,039	1.45	89.59
1899	13,764,214	2,494,380	10,983,622	30,981	1.46	81.03
1900	15,528,433	2,606,160	12,579,651	31,790	1.48	80.91

ITALY.

Agricultural cooperation, along the lines followed in Denmark and Ireland, is unknown in Italy, except in Lombardy and Venetia, where some attempts have been made with excellent results. The general principle governing these cooperative societies, or unions, is, first, the establishment of local unions; these have their head in a central union. There are about 360 such unions, and they have a membership of about 45,000. The unions and their membership are increasing. Instructors are appointed to travel from place to place to give such advice as seems necessary. No unions have yet been established to lend support to the poultry and egg industry, those so far organized being for the purpose of purchasing fertilizers and other things needed on the farm. It is probable that the success of the unions in other lines will soon suggest the value of their work in the interests of poultry and egg production.

The statistics of imports and exports which have been compiled for Italy relate to special commerce; that is, the imports are those for consumption only and the exports are those of domestic origin.

The imports of eggs have never been on a large scale; the largest amount was in 1902, when their value was \$244,251. So far as the statistics compiled for this article show, there has always been a heavy

export trade in eggs. This trade was worth \$6,781,182 in 1880, while in 1902 the value was \$8,310,821. This amount was exceeded by the three years immediately preceding 1902.

In the matter of live poultry Italy again has the balance of trade on her side. The imports have not been large, yet the amount for 1902 is very much larger than that for any previous year since 1885. The exports have been large all along, the average for the long series of years shown in the table being close to \$1,500,000.

The trade in dead poultry is not very great. The value of the imports in 1902 was \$7,961, while the exports for that year were valued at \$795,546. This latter amount has been exceeded but once, and that but slightly, in 1900.

Italian imports and exports of eggs, 1880 to 1903.

Year.	Imports.		Exports.	
	Quantity.	Value.	Quantity.	Value.
	<i>Kilograms.</i>	<i>Dollars.</i>	<i>Kilograms.</i>	<i>Dollars.</i>
1880.....	77,200	20,859	25,096,900	6,781,182
1881.....	175,100	43,933	21,830,900	5,477,374
1882.....	190,200	47,521	25,490,000	5,395,441
1883.....	175,700	40,083	23,716,700	5,949,520
1884.....	496,800	124,647	29,775,300	7,470,623
1885.....	411,300	103,191	28,874,400	7,234,587
1886.....	380,400	91,772	23,402,600	5,645,877
1887.....	240,500	68,021	19,376,900	4,674,677
1888.....	181,400	43,763	18,089,500	4,364,092
1889.....	162,700	40,821	14,155,400	3,571,590
1890.....	148,200	37,183	15,285,200	3,837,057
1891.....	128,800	32,316	17,507,700	4,392,682
1892.....	107,600	26,977	17,840,400	4,476,156
1893.....	91,300	22,897	23,652,400	5,934,387
1894.....	101,700	25,517	30,676,200	7,696,659
1895.....	122,100	33,655	24,679,200	6,191,011
1896.....	153,000	32,482	26,331,200	5,490,114
1897.....	248,800	52,820	29,399,000	6,283,368
1898.....	268,700	62,231	31,489,100	7,292,876
1899.....	216,100	54,219	33,797,700	8,479,843
1900.....	240,600	65,190	35,739,600	9,656,840
1901.....	381,900	106,875	33,048,200	9,248,539
1902.....	843,700	244,251	28,707,500	8,310,821
1903 ^a	1,355,100	392,291	25,505,100	7,413,725

^a Preliminary figures.

Italian imports and exports of live poultry, 1885 to 1903.

Year.	Imports.		Exports.	
	Quantity.	Value.	Quantity.	Value.
	Kilograms.	Dollars.	Kilograms.	Dollars.
1885.....	72,900	21,105	6,106,700	1,767,890
1886.....	75,500	19,590	5,932,600	1,602,989
1887.....	61,600	16,674	5,313,600	1,435,735
1888.....	75,700	18,993	4,875,000	1,223,041
1889.....	71,100	19,211	4,787,500	1,266,753
1890.....	73,400	19,833	4,767,500	1,288,179
1891.....	83,500	21,756	4,890,300	1,274,167
1892.....	127,200	33,142	4,909,200	1,279,092
1893.....	60,300	16,060	5,845,600	1,556,917
1894.....	67,900	17,924	6,970,300	1,856,470
1895.....	88,100	23,465	6,934,000	1,846,802
1896.....	80,800	21,052	6,676,200	1,739,484
1897.....	78,000	19,570	6,806,500	1,707,751
1898.....	53,600	12,931	6,618,300	1,796,665
1899.....	48,200	12,093	7,789,500	1,954,386
1900.....	68,300	17,136	6,688,900	1,678,245
1901.....	78,600	18,962	4,948,700	1,193,874
1902.....	150,400	37,735	5,363,900	1,345,803
1903 ^a	171,200	24,954	5,001,800	1,264,951

^a Preliminary figures.*Italian imports and exports of dead poultry, 1885 to 1903.*

Year.	Imports.		Exports.	
	Quantity.	Value.	Quantity.	Value.
	Kilograms.	Dollars.	Kilograms.	Dollars.
1885.....	9,400	2,266	1,872,200	649,502
1886.....	5,600	1,477	1,285,500	421,773
1887.....	7,900	2,592	1,137,900	373,345
1888.....	16,100	4,972	888,700	274,431
1889.....	15,100	4,954	933,900	306,413
1890.....	14,500	4,758	865,300	283,905
1891.....	12,300	3,598	1,018,400	284,482
1892.....	14,300	4,416	1,554,500	480,030
1893.....	14,700	4,539	1,607,700	496,457
1894.....	13,800	4,261	2,015,000	622,232
1895.....	19,400	5,991	2,092,000	646,010
1896.....	17,500	5,066	2,064,900	597,789
1897.....	12,500	3,378	1,626,800	493,561
1898.....	16,700	4,512	2,135,100	576,904
1899.....	38,600	10,802	2,569,000	718,935
1900.....	27,800	8,048	2,834,100	820,472
1901.....	23,500	6,576	2,551,700	714,093
1902.....	27,500	7,961	2,748,000	795,546
1903 ^a	41,000	11,869	2,453,400	710,259

^a Preliminary figures.

GERMANY.

The statistics for Germany are from Government official reports, and they are given for the "German customs district." This district comprises the 26 allied States and, in addition, the Grand Duchy of Luxembourg, the two Austrian communities of Jungholz and Mittelburg, bordering on the Bavarian territory, while separate parts of the German Empire (the territory of the free ports of Hamburg, Bremerhaven, and Geestemünde, the Prussian island of Heligoland, a part of the Hamburg community of Cuxhaven, and some of the rural communities of Baden on the Swiss borders) are excluded.

There are no data at hand to show what the German production of poultry and eggs is, but the table of exports and imports indicates very decidedly that this production is not sufficient to meet the needs of the German people. The imports of chickens in 1897 (the first year that they were reported separately) amounted to 7,468,800 kilograms, or 16,431,360 pounds, having a value of \$2,399,664. In the years following there was a steady increase, so that the amount of imports of chickens in 1903 was 10,609,800 kilograms, having a value of \$2,752,470. It will be observed that the increase in values has not kept pace with the quantities.

We find similar large imports of live geese and dead poultry. The imports of live geese into Germany in 1902 are nearly a half larger in quantity than the total number that were in the United States in 1900. The Russian statistics show a total export of live geese in 1902 amounting to 5,203,000 in number, and the German reports show that most of these are consumed in the latter country.

The imports of dead poultry are also very large, and, as will be noticed in the table, have gradually increased in both quantity and value. In 1897 the value of such imports was \$1,239,028 and in 1902 it was \$2,045,372.

The total value of imports of poultry—chickens, geese, other live poultry, and dead poultry—in 1903 was \$11,741,492. When we add to this sum the value of the imports of eggs, egg yolks, and egg whites, we have a grand sum of \$38,680,950.

German imports and exports of live and dead poultry, 1895 to 1903.

IMPORTS.

Year.	Live chickens.		Live geese.		Other live poultry.		Dead poultry.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	<i>Kilograms.</i>	<i>Dollars.</i>	<i>Kilograms.</i>	<i>Dollars.</i>	<i>Kilograms.</i>	<i>Dollars.</i>	<i>Kilograms.</i>	<i>Dollars.</i>
1895.....	25,448,900	4,457,740					2,858,400	877,506
1896.....	24,502,700	4,041,240					3,364,800	1,041,012
1897.....	7,468,800	2,399,664	18,073,800	2,494,954	2,114,500	709,002	4,067,200	1,239,028
1898.....	8,363,500	2,279,084	20,311,600	4,176,662	2,251,600	754,222	4,119,100	1,225,462
			<i>Number.</i>					
1899.....	8,925,600	2,421,650	6,875,810	4,254,726	2,435,700	817,054	4,482,500	1,333,514
1900.....	9,615,500	2,608,950	6,220,055	4,219,264	2,438,900	818,720	5,158,500	1,583,652
1901.....	9,373,500	2,498,524	6,431,247	4,301,132	2,268,300	758,744	6,601,400	2,042,516
1902.....	10,594,600	2,746,282	7,254,145	5,568,724	2,669,400	894,404	6,714,100	2,050,370
1903.....	10,609,800	2,752,470	7,814,723	6,007,596	2,876,200	965,090	6,618,500	2,016,336

EXPORTS.

Year.	Live chickens.		Live geese.		Other live poultry.		Dead poultry.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	<i>Kilograms.</i>	<i>Dollars.</i>	<i>Kilograms.</i>	<i>Dollars.</i>	<i>Kilograms.</i>	<i>Dollars.</i>	<i>Kilograms.</i>	<i>Dollars.</i>
1895.....	272,600	14,288					133,500	59,976
1896.....	279,100	88,298					179,800	77,112
1897.....	111,900	53,312	97,500	20,944	54,100	25,704	227,800	101,864
1898.....	168,500	80,206	102,200	36,414	38,300	18,326	115,000	68,544
			<i>Number.</i>					
1899.....	169,200	79,844	50,605	90,440	47,600	22,610	285,600	125,188
1900.....	191,400	91,154	53,309	63,546	46,300	22,134	264,700	115,906
1901.....	135,300	64,498	55,373	65,926	53,000	25,228	285,900	123,046
1902.....	131,200	58,256	55,329	72,352	52,600	24,990	272,600	117,334
1903.....	75,700	36,938	99,444	130,186	49,700	23,122	307,700	132,566

a For the years of 1895 and 1896 game and geese are included under the head of "Chickens." After 1896 chickens only are given, while geese are given under a separate head.

German imports and exports of eggs and egg whites, 1895 to 1903.

Year.	Imports.				Exports.			
	Eggs (including yolks).		Egg whites.		Eggs (including yolks).		Egg whites.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	<i>Kilograms.</i>	<i>Dollars.</i>	<i>Kilos.</i>	<i>Dollars.</i>	<i>Kilograms.</i>	<i>Dollars.</i>	<i>Kilograms.</i>	<i>Dollars.</i>
1895.....	83,565,000	17,104,108	196,800	187,316	771,900	176,358	208,400	170,888
1896.....	89,029,800	18,858,406	171,000	162,792	745,300	175,644	136,100	80,920
1897.....	99,590,200	20,384,224	213,300	213,248	694,100	158,508	107,000	69,144
1898.....	105,835,800	17,002,482	261,000	298,214	544,800	110,194	117,500	67,016
1899.....	112,578,600	21,568,988	243,900	276,698	497,500	107,100	208,200	119,000
1900.....	118,169,700	24,051,090	235,600	246,805	613,100	140,082	263,500	37,604
1901.....	116,486,500	24,202,934	270,000	224,910	698,800	162,078	289,400	55,216
1902.....	128,153,800	27,386,898	506,700	241,094	506,700	230,622	379,000	90,202
1903.....	124,776,900	26,667,900	1,140,700	271,558	1,035,500	245,568	446,600	106,386

AUSTRIA-HUNGARY.

In discussing the trade of Austria-Hungary it is necessary to explain that the officials of that Government use such terms as "special trade" and "transit trade." The special trade includes the imports for consumption and the exports of domestic production. The transit trade, as the phrase suggests, is that which passes through the country, going principally from Russia, Italy, Roumania, and Servia to Germany, Great Britain, Belgium, and Switzerland. The general trade includes both the special trade and the transit trade. The accompanying table shows a large business in the handling of eggs, and by inference a very large production. The same terms with the same meanings are used in Italy. In every year shown the exports have exceeded the imports, and in 1902 this difference was that between 49,514,100 and 120,324,700 kilograms, or 70,810,600 kilograms. It does not appear from the information at hand why there should be any imports whatever when so many eggs are exported; but the records show that most of the imported eggs are from Russia, and we learn, in studying the egg market of England, that the Russian eggs are quite small as compared with those from other countries. So the explanation probably lies in this, that the larger eggs of domestic production are exported from Austria-Hungary and the smaller and cheaper Russian eggs are imported for consumption.

Austro-Hungarian imports and exports of eggs, 1880 to 1903.

Year.	Special trade.				Transit.
	Imports.		Exports.		
	Quantity.	Value.	Quantity.	Value.	
	<i>Kilograms.^a</i>	<i>Dollars.</i>	<i>Kilograms.</i>	<i>Dollars.</i>	<i>Kilograms.</i>
1880.....	2,480,100	181,246	27,262,800	2,213,739	.....
1881.....	2,975,000	217,413	29,662,800	2,408,619	.....
1882.....	3,287,000	240,214	24,540,700	1,992,705	.....
1883.....	1,030,000	75,272	33,884,100	2,751,389	.....
1884.....	951,200	88,823	27,577,200	2,575,159	.....
1885.....	1,043,100	97,404	38,025,200	3,450,793	.....
1886.....	693,700	70,412	45,372,700	4,605,329	.....
1887.....	459,500	42,840	45,504,200	4,248,483	.....
1888.....	451,900	42,549	48,335,500	4,907,821	.....
1889.....	612,700	60,538	55,757,100	5,889,170	.....
1890.....	613,100	60,571	60,995,800	6,566,199	.....
1891.....	802,000	81,403	55,880,100	6,465,952	24,219,600
1892.....	830,000	91,504	65,249,800	9,501,085	25,384,000
1893.....	1,781,500	178,247	66,299,900	9,560,084	22,241,200
1894.....	20,707,100	2,942,489	90,207,400	15,375,166	19,675,300
1895.....	40,360,400	5,407,486	91,527,500	15,978,871	8,838,100
1896.....	37,220,100	5,289,046	88,670,700	16,200,137	12,753,500
1897.....	37,108,500	5,423,778	94,453,400	16,831,857	12,164,000
1898.....	40,454,500	5,746,226	95,796,100	16,239,291	15,392,400
1899.....	42,309,500	5,550,883	104,047,500	17,299,192	19,596,400
1900.....	39,349,400	5,563,155	108,787,500	20,150,285	18,015,900
1901.....	42,078,500	5,972,505	105,885,500	19,597,676	21,457,500
1902.....	49,514,100	7,046,704	120,324,700	22,764,181	31,076,900
1903 ^b	52,377,800	7,559,923	112,611,500	21,746,375	.....

^a The French officials estimate that 20 eggs of average size are equal to 1 kilogram.

^b Preliminary figures.

Previous to 1898 the values were given in gulden, worth 40.6 cents, but since 1898 and including that year they are stated in kronen, worth 20.3 cents.

The next table shows the imports of live and dead poultry and the exports of all kinds of poultry. The imports are comparatively small, but the exports are enormous for so small a country, showing a gradual increase for the years shown in the tabular statement.

Austro-Hungarian imports and exports of poultry, all kinds, 1891 to 1903.

Year.	Imports.				Exports.	
	Live poultry.		Dead poultry.		Quantity.	Value.
	Quantity.	Value.	Quantity.	Value.		
	<i>Kilograms.</i>	<i>Dollars.</i>	<i>Kilograms.</i>	<i>Dollars.</i>	<i>Kilograms.</i>	<i>Dollars.</i>
1891.....	1,409,800	286,236	74,000	15,022	6,520,400	1,588,272
1892.....	1,750,500	452,690	69,500	15,022	7,001,500	2,059,232
1893.....	1,667,000	378,798	74,000	15,834	7,428,000	2,272,788
1894.....	2,037,100	496,132	90,900	18,270	8,481,500	2,582,566
1895.....	2,891,100	704,410	100,200	14,210	7,773,900	2,524,914
1896.....	3,300,500	803,880	90,400	14,616	7,626,500	2,415,294
1897.....	3,802,700	926,492	107,100	19,488	9,024,700	2,748,214
1898.....	4,631,200	1,128,274	99,000	16,849	9,708,700	2,838,840
1899.....	5,423,900	1,140,860	95,000	15,428	10,881,200	3,975,958
1900.....	6,325,400	1,323,154	96,300	15,225	13,338,100	4,341,561
1901.....	7,261,000	1,345,484	90,400	18,270	10,013,900	2,032,842
1902.....	6,813,800	1,344,063	86,400	17,458	12,222,300	2,481,127
1903 ^a	5,597,100	1,022,511	.....	.....	.....	3,233,374

^a Preliminary figures.

The information given herewith concerning poultry raising in Hungary is from an article by G. Parthay, in *Ungarns Landwirthschaft*, 1896. He first states that Hungary has the necessary conditions for poultry raising, and that the profits of the industry may be increased greatly by a more thorough knowledge of the subject. The breeds of poultry now in use are second or third class. Excepting the turkeys, which were imported from America, all breeds have been known there for ages.

It is hardly possible that the Hungarians brought poultry with them from Asia, but they no doubt acquired some soon after. The produce of poultry was an article of trade in 1300. An order of the King in 1498 prohibited the export of poultry. In 1514 an order of the King required bondmen to pay their landlords 12 chickens and 2 geese annually. From that time till 1850 there was no progress in poultry raising. After this latter date some improvement was noticed.

It was estimated in the early sixties by Baron Cjörning that there were about 30,000,000 fowls in the country and that they were worth \$12,060,000. The exports at that time amounted to \$40,000 or \$50,000, and rose to \$400,000 in the "seventies." About this latter date the Bistrizer society of Saxon farmers organized and arranged for a

poultry fair. This, so far as known, is the first poultry show held, but its action was soon imitated by other agricultural societies. A national poultry show was held at Budapest in 1874, but as yet no really important improvement had been made. In 1877 a society of practical poultry raisers was formed, and its influence for progress was felt at once, and improvements were rapid thereafter. Numbers were multiplied, and the census for 1884 gave the following statistics of poultry on the peasant farms and on large estates:

On peasant farms:	Number.
Chickens	18, 937, 043
Turkeys	444, 225
Geese	4, 854, 049
Ducks	2, 155, 672
Doves	1, 768, 182
On large estates:	
Chickens	2, 744, 145
Turkeys	238, 998
Geese	776, 830
Ducks	519, 098
Doves	478, 426
Total	32, 916, 668

This census was taken in September, after the principal sales for the summer had been made.

In 1890 courses of instruction in poultry raising were given for the first time, and in 1891 a course in poultry breeding was given in the preparatory schools. In 1892 a market was established in the Tiergarten at Budapest, and eggs of purebred fowls were distributed free of charge to breeders. In 1893 the agricultural department distributed poultry among 16 associations and 79 teachers in the public schools. In 1894 this department gave 33 free courses of instruction on poultry breeding by means of traveling teachers, and 500 fowls were distributed. All this has tended toward a general interest in the matter of poultry raising.

In recent years, and especially since 1890, the Government has shown greater interest in this industry by organizing fairs, spreading information, and introducing better breeds.^a It has ascertained what foreign breeds would best acclimate in the country and from its breeding stations has exchanged cocks and eggs of these for an equal number of those of the common kind, thus placing excellent birds within easy reach of the peasants. The Government recommended the Plymouth Rock and Langshan chickens, the French and bronze-colored turkeys, the Pekin ducks, and the Embden geese as being best adapted to the country.

^aDie Landwirtschaft Ungarns, by Dr. Alexander V. Matlekovits. Leipzig, 1900, pp. 276 ff.

According to the agricultural enumeration of 1895 there is a slight decrease since 1884 in the number of poultry, while the exports have trebled in the same period. It is difficult to find a satisfactory explanation of this.

NETHERLANDS.

The table below, which gives the imports and exports of eggs in the trade of Netherlands for the period of 1880 to 1901, shows that the general trend has been upward for the imports and also for the exports. The exports at no time have been so large as the imports.

Prussia up to the year 1895 furnished very much more than half of the total imports of eggs, but in 1896 Russia nearly equaled the Prussian supply, increasing her supply from 911,686 kilograms in 1895 to 2,001,861 kilograms in 1896. The Russian supply exceeded the Prussian supply after this date, except for the one year of 1900. Most of the so-called Prussian eggs, however, come from Russia and Austria-Hungary, and are termed Prussian in the reports because custom-house officials are in the habit of crediting merchandise to the country last touched without inquiring into its origin.

Imports and exports for Netherlands of eggs, 1880 to 1902.

Year.	Imports.		Exports.	
	Quantity.	Value.	Quantity.	Value.
	<i>Kilograms.^a</i>	<i>Dollars.</i>	<i>Kilograms.</i>	<i>Dollars.</i>
1880.....	4, 179, 445	736, 062	284, 034	51, 382
1881.....	5, 210, 220	942, 529	562, 527	101, 761
1882.....	6, 567, 039	1, 985, 977	361, 852	65, 459
1883.....	4, 988, 352	902, 393	281, 308	50, 888
1884.....	4, 137, 653	738, 501	248, 315	44, 920
1885.....	4, 154, 174	751, 490	434, 223	78, 551
1886.....	3, 912, 185	707, 714	344, 739	62, 363
1887.....	4, 093, 119	740, 445	346, 979	62, 769
1888.....	4, 555, 618	824, 111	574, 268	104, 285
1889.....	4, 579, 206	828, 378	551, 485	99, 764
1890.....	4, 191, 497	758, 242	491, 017	88, 825
1891.....	5, 095, 755	921, 822	495, 113	99, 566
1892.....	4, 540, 637	821, 398	467, 957	84, 654
1893.....	4, 286, 822	773, 822	489, 836	88, 612
1894.....	4, 244, 753	767, 876	677, 217	122, 508
1895.....	4, 488, 635	811, 994	1, 127, 543	203, 972
1896.....	5, 019, 372	908, 004	1, 989, 659	359, 929
1897.....	6, 075, 279	1, 099, 018	2, 533, 657	458, 338
1898.....	7, 156, 428	1, 294, 598	4, 240, 159	767, 044
1899.....	6, 196, 034	1, 120, 862	3, 687, 548	677, 078
1900.....	5, 941, 414	1, 074, 802	3, 623, 392	655, 470
1901.....	5, 827, 788	1, 054, 247	3, 747, 915	677, 470
1902.....	5, 284, 003	955, 876	3, 803, 533	688, 059

^aThe French officials estimate that 20 eggs of average size are equal to 1 kilogram.

BELGIUM.

The statistics of Belgium are full of interest as showing the import and export trade for a long series of years.

Value of the imports and exports for Belgium of eggs, 1831 to 1900.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
1831	\$579	\$55,970	1866	\$110,782	\$346,821
1832	772	61,567	1867	105,764	339,680
1833	772	66,585	1868	105,764	339,873
1834	2,895	41,495	1869	165,980	409,925
1835	3,088	35,898	1870	212,107	359,559
1836	965	31,073	1871	170,567	430,390
1837	1,930	29,529	1872	318,257	429,460
1838	2,316	33,647	1873	541,944	382,333
1839	3,744	40,916	1874	818,127	477,492
1840	5,397	40,337	1875	815,232	466,288
1841	6,562	47,864	1876	1,612,129	987,195
1842	8,878	40,530	1877	1,253,728	1,103,381
1843	9,071	29,722	1878	2,157,870	937,787
1844	8,492	37,635	1879	1,444,219	987,388
1845	9,071	47,771	1880	1,394,039	816,969
1846	10,036	42,460	1881	1,373,295	1,740,667
1847	7,141	61,567	1882	1,356,973	1,839,097
1848	7,527	62,339	1883	1,672,924	1,003,600
1849	10,422	86,078	1884	1,757,844	1,187,529
1850	11,773	125,585	1885	1,556,352	2,951,163
1851	12,352	138,574	1886	1,567,932	1,075,589
1852	10,422	164,050	1887	1,495,943	249,935
1853	8,878	241,443	1888	1,226,647	934,506
1854	9,071	288,728	1889	1,213,391	869,272
1855	8,299	445,058	1890	1,570,634	834,532
1856	8,299	137,609	1891	1,589,355	1,028,883
1857	9,650	125,257	1892	1,353,895	916,557
1858	11,001	119,467	1893	1,398,759	824,689
1859	15,613	129,696	1894	1,476,643	1,053,008
1860	17,563	191,842	1895	2,042,519	1,489,767
1861	22,581	229,670	1896	2,242,467	1,746,763
1862	28,757	242,601	1897	2,319,474	2,065,486
1863	33,196	261,901	1898	1,971,688	1,819,183
1864	55,970	316,906	1899	1,891,207	1,759,967
1865	78,944	266,147	1900	1,962,424	1,505,979

RUSSIA.

The exports of Russian eggs have been increasing greatly during recent years, and the possibility of that country for expansion in the production of poultry and eggs seems to be unlimited. The information upon production, consumption, methods of shipment, etc., is very meager. Some tables are given of exports of poultry and poultry products over the European frontiers, but nothing is available on the conditions in Asiatic Russia.

The first table gives the quantity and value of the exports of eggs for a series of years, showing an increase in value from \$5,226,772 in 1888 to \$17,917,880 in 1901. A study of these figures, however, in connection with similar statistics from other exporting European countries, shows that the Russian eggs are considered an inferior article and usually rank last in the market quotations. The eggs are not produced and prepared for shipment with that scrupulous care that characterizes the work of Denmark, France, and Ireland.

The second table shows that a business of no mean importance is done in the matter of exporting egg yolks and egg whites. The business in 1902 amounted to more than \$90,000.

Russia is one of the leading geese-raising countries, and most of the exports of this product, both alive and dead, go to Germany. The table shows figures of exports of geese and other live poultry combined for several years, but since 1899 the geese have been given separately. The number exported in 1900 was 5,302,832. That is only 300,000 less than the number of geese in the United States in the same year. But it should be pointed out in this connection that a very large number of geese are slaughtered before shipment, and these form a considerable part of the exports shown in the table of "Exports of dead poultry and game." It is not possible to show how much of the quantities given in the table is geese or how much is game, but it is quite certain that considerably more than half of the total is geese.

Russian exports of eggs by European frontiers, 1888 to 1903.

Year.	Dozens.	Value.	Year.	Dozens.	Value.
1888.....	56,518,055	\$5,226,772	1896.....	122,312,592	\$11,270,366
1889.....	50,437,036	5,058,204	1897.....	141,894,054	13,047,793
1890.....	62,545,728	6,889,555	1898.....	157,015,917	15,887,438
1891.....	69,090,458	6,733,640	1899.....	138,607,250	14,553,704
1892.....	60,929,131	5,888,000	1900.....	145,234,084	15,835,214
1893.....	64,926,359	6,779,287	1901.....	162,250,000	17,917,880
1894.....	78,924,062	8,059,422	1902.....	185,750,000	^a 19,886,725
1895.....	116,767,903	10,249,848	1903.....	230,666,666	^a 26,265,000

^a These figures are preliminary and, in addition to the exports by the European frontier, include those to Finland and from the Caucasus.

BUREAU OF ANIMAL INDUSTRY.

Russian exports of egg yolks and egg whites by European frontiers, 1888 to 1902.

Year.	Egg yolks.		Egg whites.		Year.	Egg yolks.		Egg whites.	
	Quantity.	Value.	Quantity.	Value.		Quantity.	Value.	Quantity.	Value.
	Pounds.	Dollars.	Pounds.	Dollars.		Pounds.	Dollars.	Pounds.	Dollars.
1888.....	2,333,586	156,911	324,150	25,838	1896.....	2,428,094	149,889	422,847	20,258
1889.....	2,779,690	168,354	378,825	26,524	1897.....	2,831,693	201,351	432,959	20,118
1890.....	2,724,004	171,034	428,156	31,429	1898.....	2,307,043	157,656	406,091	18,244
1891.....	2,000,480	115,844	325,811	20,390	1899.....	1,306,749	84,305	177,206	10,948
1892.....	1,136,946	65,360	269,259	15,047	1900.....	1,648,739	106,997	221,012	12,700
1893.....	2,214,449	141,992	345,349	14,858	1901.....	1,256,227	73,051	94,905	5,000
1894.....	2,325,063	177,743	353,655	22,181	1902.....	1,336,181	80,855	144,452	10,300
1895.....	3,200,117	284,514	492,040	28,536					

Russian exports of geese and other poultry, 1888 to 1902.

Year.	Geese and other poultry.		Year.	Geese and other poultry.	
	Quantity.	Value.		Quantity.	Value.
	Number.	Dollars.		Number.	Dollars.
1888.....	2,759,593	1,240,402	1894.....	5,050,414	2,582,524 ^a
1889.....	3,731,066	1,845,000	1895.....	6,028,003	2,587,735
1890.....	3,819,657	2,014,807	1896.....	5,406,725	2,409,000
1891.....	4,424,178	2,090,367	1897.....	6,215,067	2,552,120
1892.....	4,834,413	2,336,623	1898.....	7,562,709	3,270,154 ^a
1893.....	4,507,447	2,285,964			

Year.	Geese.		Other poultry.	
	Quantity.	Value.	Quantity.	Value.
	Number.	Dollars.	Number.	Dollars.
1899.....	4,999,488	2,504,676	2,547,323	769,354
1900.....	5,302,832	2,662,239	2,778,154	690,277
1901.....	5,650,715	2,865,981	2,501,311	602,803
1902 ^a	5,203,000	2,642,465	3,130,000	777,650

^a These figures are preliminary and, in addition to the exports by the European frontiers, include those to Finland and from the Caucasus.

Russian exports of dead poultry and game, 1888 to 1902.

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	Number.	Dollars.		Number.	Dollars.
1888.....	2,371,940	471,540	1896.....	2,271,476	876,704
1889.....	2,898,378	704,278	1897.....	2,639,984	1,064,386
1890.....	1,927,486	516,229	1898.....	2,340,968	749,856
1891.....	1,689,250	390,025	1899.....	2,736,192	791,335
1892.....	1,316,553	287,527	1900.....	3,135,502	1,065,135
1893.....	1,157,517	411,345	1901.....	2,913,018	1,431,914
1894.....	935,565	245,594	1902 ^b	2,361,810	997,040
1895.....	1,433,521	495,116			

^a Pounds.

^b These figures are preliminary and, in addition to the exports by the European frontiers, include those to Finland and from the Caucasus, and for 1902 are for poultry only.

APPENDIX I.—RULES GOVERNING THE SOCIETY FOR POULTRY BREEDING IN DENMARK.

[Translation by Andrew Fossum, Ph. D.]

A. OBJECT.

SECTION 1. The society, which has its headquarters at Aarhus, has for its object the promotion of poultry keeping in Denmark.

B. MEMBERS.

SEC. 2. (a) Honorary members; (b) extraordinary members, who pay at least 50 kroner (\$12.40) once for all, or 10 kroner (\$2.68) annually; and (c) ordinary members, who pay 2 kroner (53.6 cents) a year, in foreign lands 4 kroner (\$1.07) a year. Members are classified into county circuits. Application for membership is made either to the directors or representatives of the society or to the office of the society at Aarhus. Resignations must be sent in writing to the head office. A member will be obliged to pay the fee for the current year, unless he sends in his resignation before the first of January. In case a member refuses to pay the fee when it is due his name is struck from the membership list. By a unanimous vote directors may strike the names of members from the list. An excluded member may appeal to the representatives. The annual fee is due in January and is collected in February through the mails. Twenty-five per cent of the fees from members goes to the county circuit. Apportionments are made on April 1 and December 31 of each year. Honorary members are admitted by a two-thirds vote of the representatives present at a meeting, on the recommendation of the directors.

C. DIRECTORATE.

SEC. 3. The directorate consists of seven members, of whom, as a rule, there are three from Jutland, one from Fyn, two from Sjælland and Bornholm, and one from Lolland-Falster. These choose from their own number a president and a vice-president for one year. The president, vice-president, and secretary are the executive committee. The directors define the authority of the executive committee. Of the directors, two retire the first two years by lots, and three the third year in the same manner, and so on by turns.

SEC. 4.—The president, or in his absence the vice-president, represents the society and summons the executive committee and directorate to meetings, which must also be held when more than one-half of either make such a demand. Meetings are called at least one week in advance by letter, in which is contained also the order of the day. The meetings may act when more than one-half of their members are present. The president presides at all the meetings, also at those of the representatives, and orders the payment of bills against the society.

SEC. 5. The secretary, who is also treasurer, is chosen by the directorate. In case of a change of secretary the salary and office expenses are decided on by the representatives on the recommendation of the directorate. The secretary is to keep a membership list, conduct the correspondence, keep the minutes of the meetings, edit the reports, receive the annual fees and charges for advertisements, and present the financial statement for the year, which is to go to the auditors at the latest in the January quarter.

SEC. 6. The society appoints an adviser, who is nominated by the directors, but whose salary is determined by the representatives on the recommendation of the directors. The directors instruct him as to his duties.

D. COMMITTEES.

SEC. 7. The following standing committees are appointed: (1) The periodical, library, lectures, prize competitions, adviser, etc. (2) Distribution of breeds, breed-

ing centers, feeding of young chickens, trade in the products of poultry, breeding, awarding of prizes to well-conducted and profitable poultry runs, etc. (3) Poultry shows. The committees consist of three members each, of whom the directors elect one. The committees choose their own chairmen and distribute the work among themselves. The committees meet as often as the chairmen find it necessary.

SEC. 8. Besides traveling expenses over the shortest route by first-class steamer and second-class railway, directors and members of committees receive an allowance of 6 kroner (\$1.61) per day while in the service of the society.

E. AUDITING.

SEC. 9. The representatives elect annually two auditors to revise the current expenses of the year. The financial year is the same as the calendar year. The auditors must complete their work at the latest one month after receiving the financial statement.

SEC. 10. The financial statement, with any notes concerning it, is returned to the president, who allows the secretary an opportunity to express himself regarding these before he presents it to the representatives for adoption.

F. REPRESENTATIVES.

SEC. 11. The representative body is the supreme authority in the society. It is composed of the presidents and vice-presidents of the county circuits, with the secretaries as substitutes (Copenhagen is considered one county), and consists of twelve members from Sjöland, two from Bornholm, four from Fyn, two from Lolland-Falster, and twenty from Jutland; total, forty.

SEC. 12. As a rule the society holds one meeting a year. The call is to appear in the Periodical for Poultry Breeding at least two weeks before the meeting. The meeting is legal if it has been summoned in due form and more than one-half of its members are present. Extraordinary meetings of the representatives may be summoned by the president, who is required to do so when more than one-half of the presidents of the county circuits demand it.

SEC. 13. The meeting is held in the early summer, usually in connection with the annual exhibition.

SEC. 14. Every member of the society is admitted to the meeting of the society. Only members of the directorate, representatives, and honorary members are entitled to take part in the discussions and vote at the meeting.

SEC. 15. The directors shall present at the regular meetings of the representatives (a) the audited financial statement of the last year for adoption; (b) the plan of work for the society in the coming year; (c) the budget; (d) the election of two auditors for the current year in accordance with section 9; (e) the election of directors in accordance with section 3; (f) the election of committees according to section 7, and (g) the election of judges for the next exhibition.

SEC. 16. Any representative may make inquiries of the directorate and send in, either from himself or from other members, subjects for discussion at the meeting. These must, however, reach the directorate four weeks before the meeting of the representatives. Subjects arriving later should be reported to the meeting, but can not, without the consent of the directorate, be discussed or voted upon. So far as possible, the directors should print and forward to the representatives before the meeting the subjects for discussion. The directorate determines the order in which the subjects for discussion are to be taken up.

SEC. 17. The representatives can by a majority vote pass resolutions in any matter pertaining to the society. Voting is done by show of hands or, if five of the members of the meeting so desire, by ballot.

SEC. 18. The representatives traveling by first-class steamer or second-class railway over the shortest route to and from the meetings have their expenses paid. Their board is also paid by the county circuit in accordance with the decisions of the circuit as to details.

G. PERIODICAL.

SEC. 19. The head and county circuits have a common organ, which is sent free to all members. It appears at least twice a month. The directors choose the editor and the representatives determine his salary in accordance with the recommendation of the directors.

H. CHANGE OF RULES.

SEC. 20. In case of doubt as to the correct interpretation or application of the rules the directors decide, subject to appeal to the representatives.

SEC. 21. Only a meeting duly summoned and attended by the representatives of more than one-half of the counties can by a two-thirds majority vote make changes in or additions to these rules. In case a meeting can not legally act, a new meeting is called, which may decide the matter by a simple majority vote.

Thus adopted at the meeting of the representatives at Slagelse in 1902.

By-Laws of the Society for Poultry Breeding in Denmark—Circuit Society in ——— County.

A. THE OBJECT OF THE CIRCUIT.

SECTION 1. The object of the circuit is to work for the promotion of poultry breeding in ——— county, and this is sought by exhibitions, pamphlets, meetings, lectures, and in any other way that the directors find suited to their purpose. The circuit is a section of the Society for Poultry Breeding in Denmark.

B. MEMBERS OF THE SOCIETY.

SEC. 2. On application to the directors of the circuit, anyone may become a member of the circuit and thereby of the Society for Poultry Breeding in Denmark. Members may be excluded by the unanimous vote of the directorate; yet an excluded member may appeal to the first general meeting.

SEC. 3. The means of the circuit are as follows: Twenty-five per cent of the fees of the members of the Society for Poultry Breeding in ——— County; honorary prizes from the Society for Poultry Breeding in Denmark to the exhibition of the circuit; gifts received on application from savings banks, etc., in the county; State subsidies for the annual exhibition, obtained chiefly through local agricultural societies; other contributions from persons interested in the work.

SEC. 4. Every new member receives, on paying his initiation fee, a copy of the rules of the Society for Poultry Breeding in Denmark and by-laws of the circuit.

C. THE DIRECTORATE.

SEC. 5. The directorate consists of at least three members, chosen from the total number of members of the circuit. Of their own number they choose, for one year at a time, a president, vice-president, and secretary and treasurer. The president and vice-president, with the secretary as a substitute, are representatives in the Society for Poultry Breeding in Denmark.

SEC. 6. The president summons the directors to meetings one week in advance; and meetings must be held when more than one-half of the directors demand it in writing. In order that the resolutions of the directors may be valid, more than one-half of the directors must be present. The president presides and directs the discussions in the meetings of the directors and in the general meetings. He looks after the general interests of the circuit and decides current matters which he does not deem sufficiently important to lay before the directors as a body. In the absence of the president the vice-président takes his place.

SEC. 7. The secretary of the circuit, who is also treasurer, conducts the correspondence of the society, keeps the minutes of all the meetings, arranges shows and exhibitions, provides office room, and keeps the archives of the society, and, under the direction of the president, transacts all the business of the society; keeps a correct list of the members of the society, which list is always to be on hand at the meetings. He makes up the accounts of the year, which must be sent to the auditors at the latest one month after the close of the financial year. The auditors return the audited accounts to the president, who allows the secretary an opportunity to express himself regarding the report of the auditors, and submits the accounts to the directorate and to the general meeting.

D. THE GENERAL MEETINGS AND THE MEETINGS FOR DISCUSSION.

SEC. 8. The circuit holds an annual general meeting in the spring, usually in the month of March. The announcement appears at least two weeks in advance in the Poultry Journal, which is the paper of the society and which is sent free to all members. The other meetings of the circuit are announced in the same way. The president may call extraordinary meetings, and is obliged to do so when more than one-half of the directorate or twenty of the members of the society request it in writing.

SEC. 9. A plan for the activity of the circuit in the following year is submitted to the general meeting with the necessary information as to the financial condition of the society. There is to be submitted to the general meeting, furthermore, (a) the audited accounts of the last financial year for adoption; (b) in case an exhibition and prizes are proposed, a program worked out in detail as to divisions into classes and size of prizes; (c) a committee of judges for the exhibition is elected; (d) two auditors of the accounts of the current year are chosen; (e) directors for the following year are chosen. The choice is for two years, but the first year one more than one-half withdraws; the second year the remainder withdraws; the first time by lots, later by turns.

SEC. 10. The president receives, by March 1, any proposition that a member may desire to have discussed by the meeting.

SEC. 11. The general meeting may, when it is legally summoned, pass resolutions in any affair of the society. Propositions to change the rules must formerly have been discussed, and, in calling the meeting, the announcement must be made that a vote will be taken to change the rules and that changes are made by a two-thirds majority of the members present. In order to be valid, the resolution must be ratified by the representatives of the Society for Poultry Breeding in Denmark.

SEC. 12. Members vote by show of hands, or by ballot when two of the members so desire. Members present may, when so empowered, vote by proxy, but no one shall cast more than five votes.

E. EXHIBITION.

SEC. 13. In case the circuit decides to hold an exhibition and award prizes, it selects, in order to pass upon the exhibits, not less than three judges, of whom the circuit chooses two and a substitute and the Society for Poultry Breeding in Denmark the third and a substitute.

SEC. 14. The judges are required, unless they judge by points, to give reasons for their decisions. The memoranda of the judges are entered on the minutes of the society.

SEC. 15. The president and vice-president of the society, or, in their failure to go, the secretary, have their expenses to the meetings of the representatives of the Society for Poultry Breeding in Denmark paid in proportion to the length of the journey, according to the detailed resolutions of the circuit.

Thus adopted at the meeting of representatives at Slagelse, 1902.

**APPENDIX II.—RULES OF THE SOCIETY FOR THE PROMOTION OF
POULTRY BREEDING IN DENMARK.**

[Translation by Andrew Fossum, Ph. D.]

A. OBJECT.

SECTION 1. The object of the society is to further poultry breeding, especially chicken breeding, and the egg trade in Denmark.

SEC. 2. The society strives to attain this by (a) the distribution of pamphlets; (b) by holding exhibitions, discussions, and lectures; (c) by directions and information regarding poultry matters; (d) by establishing experiment stations and distributing poultry and selling eggs of pure breeds.

B. MEMBERS.

SEC. 3. The members are (a) honorary members, who may be chosen at the meetings of the representatives on the recommendation of the directorate; (b) extraordinary members—any member who has paid into the treasury at one time not less than 50 kroner (\$13.40) may become an extraordinary member; (c) ordinary members, who pay an annual fee of (1) 2 kroner (53.6 cents) in case they live in Denmark, (2) 3 kroner (80.4 cents) in case they live abroad. The directors may, when the circumstances require it, increase or decrease the fee and accept poor members free of charge. The fee for the current year is collected in January in advance. Application for admission goes to the office of the society. Withdrawal is sent in writing to the same office, and must be in before the first of December; otherwise a member is obliged to pay the fee for the following year. In case a member refuses to pay the fee when it is due his name is dropped from the membership list. Members may be excluded by a two-thirds vote of the representatives present on the unanimous recommendation of the directors.

C. DIRECTORATE.

SEC. 4. The directorate consists of nine members chosen by the representatives from their own members at their meeting. Three withdraw annually by turns. The directorate chooses its own president and vice-president. In years when the society gives exhibitions the directorate may add to their number; the directorate thus increased constitute the exhibition committee.

SEC. 5. The president represents the society and calls the meetings of the directorate. Meetings must also be held when more than one-half of the directors so desire. Resolutions are binding if more than one-half of the directors are present. The president or vice-president presides at the meetings of the directorate.

SEC. 6. The directorate appoint a business manager, fix his salary, and instruct him regarding his course of action. The manager acts as secretary and treasurer, and is present at all the meetings; he also gives security in the amount of at least 2,000 kroner (\$536). He can not vote unless he is a member of the directorate.

SEC. 7. The manager is required to have an office at Copenhagen. He keeps a list of the members, the minutes of the meetings of the directors and representatives, conducts the correspondence, preserves and arranges the archives, edits the reports of the meetings of the representatives, receives the fees of the members, and submits the annual accounts. These he sends in the January quarter to the president, who forwards them to the auditors. Bills can be paid only when they are approved by the president or vice-president.

SEC. 8. Matters to be decided by the representatives and requiring expedition may in exceptional cases be decided by the directorate without a meeting by letting the representatives vote by letter, the directors mailing voting blanks to the representatives.

D. REPRESENTATIVES.

SEC. 9. The directorate are elected and assisted by a body of representatives consisting of thirty members—fifteen from Copenhagen and fifteen from the rest of the country. One-third withdraw annually by turns. Representatives and substitutes are chosen by the ordinary members of the society by majority vote. The election takes place at the meeting of the representatives and must be announced two weeks in advance in the Poultry Journal. No one can vote by proxy. If any meeting does not have at least one hundred voting members present—not counting representatives and directors—the election goes to the meeting of representatives and directors. Directors and representatives have the right to vote as ordinary members. Admission to the meetings of the representatives is open to all members, but only directors and representatives, except in accordance with the rules above, have the right to vote. Directors have no vote in electing directors. The representatives supervise the actions of the directors through auditors chosen by the representatives.

SEC. 10. The society holds annual meetings of the representatives at Copenhagen. In exhibition years the representatives hold their meeting during the exhibition. Notice of the meeting appears in the paper of the society four weeks in advance. The representatives are furnished with the order of the day and an abstract of the accounts at least two weeks before the meeting. When a member can not be present, he shall notify the directors at least five days in advance. The directorate may summon a substitute to take the place of such a member. The president shall call extra meetings of the representatives when more than one-half of the directors and representatives demand them.

SEC. 11. Members have free admission to all the exhibitions of the society.

SEC. 12. The directors shall present at the annual meetings of the representatives (a) the audited accounts of the previous year for adoption; (b) the plan of work for the coming year; (c) the plan of the exhibition in case one is to occur in the coming year; (d) nominations of judges for the exhibition; (e) two auditors and two substitutes for the next financial year; (f) choice of directors; (g) choice of representatives and substitutes; (h) selection of the next meeting place. The directors and representatives together choose a chairman, who can not speak, however, without the consent of the meeting.

SEC. 13. Any representative may make inquiries of the directorate and send in subjects for discussion at the meetings of the representatives. These he must send at least four weeks in advance. Subjects arriving later may be reported to the meeting, but can not be discussed. So far as possible, the directors are to print and forward to the representatives before the meeting the subjects for discussion.

SEC. 14. By majority vote the representatives pass resolutions on any matter pertaining to the society. Changes in the rules can be made only when the representatives have received notice in advance that such propositions are forthcoming, and when two-thirds of the representatives vote for their adoption at two successive meetings.

SEC. 15. Voting is done by raising the hand, or by ballot if one member of the meeting demands it. Ballots must not be signed.

SEC. 16. Directors and representatives receive free passage to and from the meetings over the shortest route by first-class steamship and second-class railway.

APPENDIX III.—RULES OF THE SOCIETY FOR PROFITABLE POULTRY BREEDING.

[Translation by Andrew Fossum, Ph. D.]

SECTION 1. The society, whose headquarters are located at Copenhagen, exists for the sole purpose of breeding useful poultry, and to the exclusion of those used for sport.

SEC. 2. It strives to attain this object by (a) establishing as many centers as possible in all the counties, the especial duties of which shall be to exchange and distribute free of cost eggs and fowls of pure breeds, and to sell breeding stock, and freely to give advice in rational poultry breeding; (b) holding poultry shows in connection with the agricultural exhibitions in the provinces; (c) furthering in general the production and exportation of eggs and poultry; (d) awarding prizes to private poultry runs on the basis of their profitableness; (e) instructive lectures; (f) the eventual appointment of itinerant instructors or advisers in poultry keeping; (g) the eventual publication of a periodical.

SEC. 3. The members are: (a) Honorary members nominated by the directors and elected at a regular meeting of the representatives by a two-thirds majority; (b) extraordinary members, who, by paying once for all a fee of 50 kroner (\$13.40), are henceforth considered life members; (c) regular members, who pay to the society an annual fee of at least 2 kroner (53.6 cents); cottagers and those who are similarly situated, however, pay only 1 krone (26.8 cents) a year.

SEC. 4. Members may be admitted at any time by the directorate or by the representatives, and also at the poultry centers. Withdrawals, on the other hand, must be made in writing to the treasurer before the end of December. A member may be excluded from the society by a two-thirds vote of the directors. This decision can not be appealed.

Members pay their first annual fee when they are admitted to the society, and afterwards in the first half of the month of December; otherwise it is collected through the mails.

SEC. 5. The directorate consists of fifteen members, who elect their own officers, viz, president, vice-president, secretary, and treasurer. In the absence of the president the vice-president takes his place. The members of the directorate are elected at the regular meetings of the representatives, for three years. After the expiration of the first three years one-third retire annually, the first two times by lot, afterwards by turns. In case more than three members of the directorate withdraw or retire between the annual meetings of the representatives, the representatives must be summoned in extra session to fill the vacancies for the unexpired terms. Retiring members may be reelected.

SEC. 6. The president represents the society and calls a meeting of the directors as often as he deems it necessary. The directors also may demand a meeting.

The president presides at all the meetings of the directorate, and, in case of a tie, has the deciding vote.

SEC. 7. The secretary conducts the correspondence, superintends the distribution of the periodical, makes the announcements in the papers, assists the treasurer in preparing the financial statement, and keeps the minutes of the meetings of the directors and representatives. The representatives determine the annual salary of the secretary. The treasurer keeps the records and lists of members, sees to it that the fees are collected in accordance with section 4, and keeps an account of the finances. Under ordinary circumstances no bills must be paid without being previously referred to the president or vice-president.

SEC. 8. The society has, as already indicated in sections 4 and 5, a body of representatives who represent the members. The representatives shall number thirty-eight—two from each county. They are elected directly by the members in the

counties, for a term of three years at a time. After the lapse of the first three years one of the representatives retires by lot. The retiring member may be reelected.

SEC. 9. The representatives assemble ordinarily once a year before August 1, on a date fixed by the directors, but an extra meeting may be called at any time by the directors; also nineteen representatives, assigning the cause in writing to the directors, may demand an extra meeting.

SEC. 10. At the regular annual meeting of the representatives the president of the directors presents: (a) The report of the transactions in the past year; (b) the audited accounts for ratification; (c) a plan of work for the coming year; (d) a draft of instructions for the judges at the poultry shows.

Hereupon they proceed to elect the directors and two auditors to audit the accounts of the ensuing year.

SEC. 11. Any member of the society may attend the meetings of the representatives, but only representatives can vote. Members have everywhere free admission to the shows.

SEC. 12. The representatives must be informed by letter of the dates of the meetings, as well as the subjects for discussion, at least three weeks in advance. Any member of the society may send in a subject for discussion at the meeting of the representatives; it must, however, be sent to a representative at least four weeks before the meeting and by him forwarded to the president.

SEC. 13. The representatives are the last resort in the affairs of the society; a simple majority decides. In electing directors any member may demand a ballot; only such representatives as are present at a meeting are entitled to vote.

SEC. 14. After being laid before the directors, the statement of accounts is turned over by the president to the auditors before the end of February. It is later presented at the regular meeting of the representatives.

SEC. 15. It will be necessary that two-thirds of the representatives be present and that three-fourths of these vote for a motion in order to change the constitution or dissolve the society.

SEC. 16. Representatives are entitled to choose at least one deputy for each parish to assist them in the work of the society.

SEC. 17. The society pays the traveling expenses of the representatives and directors to and from the meetings by first or second class railway or steamer, and by the shortest route.

APPENDIX IV.—RULES GOVERNING THE DANISH COOPERATIVE EGG EXPORT SOCIETY.

[Translation by Andrew Fossum, Ph. D.]

THE SOCIETY.

SECTION 1. The name of the cooperative society is the "Danish Cooperative Egg Export."

SEC. 2. The cooperative society, which came into existence on April 20, 1895, has, since April 20, 1900, been located and incorporated at Copenhagen. The main office may be transferred to any other place in Denmark whenever the directors and the representatives so decide.

SEC. 3. The principal object of the society is to provide the best possible market abroad for Danish eggs by guaranteeing to the customers that eggs, delivered with the registered trade-mark as fresh eggs, are absolutely new-laid and clean. Furthermore, it is the object of the society to protect in every way the interests of egg producers, and may include the preservation and the sale of eggs or the fattening of poultry belonging to members of the cooperative society, also to further promote well-conducted poultry breeding and poultry keeping.

THE CIRCUITS.

SEC. 4. The cooperative society consists of circuits of not less than ten members. Exceptions to this rule may be made by the joint action of the directors and the representatives. Every circuit that has joined the cooperative society is bound in every way by the laws in force from time to time. The directors of the circuit shall see to it that the rules of the circuit are in harmony with those of the society.

SEC. 5. When a circuit desires to join the cooperative society the directors of the circuit notify the president of the cooperative society in writing. Such an entrance is binding for at least one year. A copy of the rules of the circuit, signed by the directors of the circuit, and a membership list with the number, name, and occupation of each member, must accompany the notification. Furthermore, the circuit is required to pay, as an entrance fee, to the cooperative society, 50 öre [about 13½ cents] for each of its members. For each new member 50 öre [about 13½ cents] are likewise paid, unless the new member takes the place of a withdrawing member. The president of the cooperative society shall be immediately informed in writing by the president of the circuit of the admission of new members into the circuit. The directors may refuse the admission of circuits or members of circuits. Appeal from the decision of the directors can be made to the representatives and the general meeting. Withdrawal, which is effected in the same manner as admission, can be granted only on the first of January, after at least three months' notice.

SEC. 6. Each circuit that has been admitted into the cooperative society is required to deliver all the eggs collected from the members. Eggs over seven days old must not be delivered in the circuit. Violation of this rule, as well as delivering spoiled eggs, is punishable by a fine of 5 kroner [\$1.34], and, if repeated, the fine may be increased to 10 kroner [\$2.68]. At the beginning of each calendar year only 5 kroner are imposed for the first offense. One-half of the fine goes to the cooperative society and the other half to the circuit in question. The fine is imposed by the directors of the cooperative society, whose decision can not be appealed. The costs of a suit to collect the fine are paid by the one on whom the fine is imposed, the ordinance of August 6, 1824, notwithstanding.

SEC. 7. The circuits must not retain the eggs received more than four days before forwarding them to the society. The directors of the cooperative society may, however, according to circumstances, make exceptions in this matter, as well as in the time limit for delivering, heretofore mentioned in section 6. The eggs must be delivered absolutely clean, and, in order that their origin may be traced, must be distinctly stamped with the number of the circuit and the number of the member, according to the membership list. The society may refuse to accept eggs that do not answer these conditions, or discount them in price. In order that the stamping of eggs may be uniform, each circuit must provide its members with ink and rubber stamps from dealers approved by the society.

SEC. 8. If a circuit has not delivered all the eggs collected during the year to the cooperative society, or if it has kept the eggs beyond the time specified in section 7, it loses its share of the annual surplus and reserve fund for the year in question, and the directors of the cooperative society have, furthermore, the right to consider said circuit as having withdrawn at the close of the financial year.

The directors may exclude circuits or members of circuits. An appeal from such decision may be made to the representatives or to the general meeting, but not to the courts. The stamps of circuits that have withdrawn or have been excluded must be sent to the main office as soon as possible without reimbursement. Circuits or members of circuits that have withdrawn or have been excluded have no claims whatsoever to the property, surplus, or reserve fund of the cooperative society.

SEC. 9. The freight on eggs by railway or steamer is paid by the main office, but any amount exceeding 1 öre [less than one-half cent] per pound of eggs, net weight for each shipment, is charged to the circuit.

THE DIRECTORATE.

SEC. 10. The directorate consists of the president and four other members. They are elected by the general meeting—the president for five years and the other members for two years each, in such a manner that two withdraw in their turn each year. Members may be reelected at the expiration of their terms. The directors choose a vice-president from their own members. The executive committee consists of the president, manager, and a member elected by the directors from their own number. Two of its members may continue to fix the quotations on export eggs and sign papers on the part of the society. In case one of the directors dies or resigns, or for some other reason ceases to hold office, the representatives may fill the vacancy. If the president ceases to officiate, the vice-president may act and draw the salary of the president until the next regular general meeting, unless the directors deem it necessary to call an extra general meeting to fill the vacancy. Excepting the president, the members of the directorate draw no salary, but while performing their duties they receive 6 kroner [\$1.61] per day and traveling expenses by first-class steamer or second-class railway, as well as 1 krone [26.8 cents] per mile for conveyance by carriage.

SEC. 11. The directorate determines upon the methods of business, appoints a manager and the other permanent officers, but the representatives fix their pay. The president calls a meeting of the directors when he finds occasion to do so, or when at least three directors request it. If possible, the call is made seven days before the meeting. The president presides at the meetings; resolutions are passed by simple majority in such a way that a legal resolution always requires three votes. The president of the representatives is entitled to attend the meeting, but is without vote.

SEC. 12. The president directs the business of the cooperative society, being responsible for the management. He represents the society in courts. The salary of the president is 5,500 kroner [\$1,474] a year, and, by way of percentage, a half a krone [13.4 cents] per thousand of the volume of transactions of the last business year exceeding 3,000,000 kroner [\$804,000]. Traveling in the interests of the society the president receives the same allowance for expenses as the members of the directorate.

THE REPRESENTATION.

SEC. 13. The representative body, which consists of one member from each district, is chosen for four years, one-half retiring every other year. The election takes place at the regular general meeting, when the deputies assemble by districts and choose one representative for each district. Retiring representatives may be reelected. The representatives choose a president and vice-president from their own number to serve for two years. The president summons the representatives as often as he or five other members deem it necessary. A notice of seven days, if possible, should be given. At the meetings a secretary is chosen to keep the minutes in which the discussions and the votes are recorded. The minutes are signed by all the representatives after being read. The president presides at the meetings. The directors take part in the discussions, but have no vote.

SEC. 14. The directors must submit all important matters not pertaining to the daily routine to the representatives, unless a matter can not be delayed, in which case the directors decide and bring it before the representatives at a later date. Absolute majority, or at least ten votes, are required to decide a question. The representatives draw no regular salary, but receive the same daily pay and traveling expenses as the directors. If a representative dies, or withdraws, or resigns, or from some other cause ceases to act, the deputies of his district fill the vacancy at the first general meeting.

THE AUDITORS.

SEC. 15. The auditors are to be two business men nominated by the representatives and chosen by the general meeting for two years in each case; they retire in

alternate years, the first one by lot (at the end of the first year). Furthermore, two business men are chosen as substitutes. The auditors shall audit the accounts at least once a month. They have at all times unhindered opportunity to inspect the operations of the society, especially by examining the stock and the cash on hand, the books and accounts, other records, etc.

Should the auditors find occasion for censure, they shall report to the president of the society and the manager is required to comply with his directions until the matter can be decided at a meeting of the directors. When both auditors are agreed they can demand a meeting of the directors or of the representatives. The auditors may be summoned to the meeting of the directors, but they have no vote. The pay of the auditors is determined by the representatives, upon the recommendation of the directors.

THE GENERAL MEETING.

SEC. 16. The general meeting consists of the directors, the representatives, and a deputy from each circuit of at least ten members; the directors and representatives, however, have no vote unless they be deputies at the same time. The deputy must bring credentials from the directors of his circuit. A deputy from Bornholm may represent as many as five circuits.

SEC. 17. A regular general meeting shall be called annually in the last half of the month of March. Extra general meetings shall be held when the directors deem it necessary, or when demanded by one-tenth of the circuits or by one-half of the representatives. The extra general meeting shall be held within one month after such a demand has been made. The general meeting is called by the directors in writing to the presidents of the circuits at least fourteen days before the meeting. The call shall, so far as possible, be accompanied by the order of business. Time and place of meeting are announced in the organ of the society.

Propositions to be discussed in the regular general meeting must be reported to the president by February 20, and propositions to be discussed at the extra general meetings must be forwarded to the president when the demand for such meetings is made. Immediately before the regular general meeting the representatives hold a meeting at which all the matters in the order of the day of the general meeting are discussed; the representatives may, by a three-fourths majority, refuse to submit any of the matters to the general meeting, thereby causing them to be dropped from the order of the day; matters mentioned in section 19 and complaints which, according to sections 5 and 8, can be appealed to the general meeting are excepted.

SEC. 18. The general meeting elects a chairman, a secretary, and two tellers. The secretary shall keep a record of the transactions and votes of the general meeting. The record is signed by the chairman and the executive committee; it is admitted as full evidence regarding the transactions of the general meeting. Decisions are made by majority, except in cases where, according to the rules, a qualified majority is required. In case of a tie, the president's vote decides. Voting is done by ballot, if the president so decides, or at the request of at least twenty members. Admission cards to the general meeting must be shown in order to vote. On the motion of the executive committee or of the president, a deputy may be excluded from the general meeting by majority. This decision can not be made the cause of a lawsuit.

SEC. 19. At a regular general meeting the following is the order of business: (a) Report on the operations of the cooperative society in the past financial year; (b) to adopt the accounts, after being audited; (c) the eventual choice of a president; (d) to choose members of the executive committee; (e) the eventual choice of representatives; (f) the choice of one auditor and one substitute; (g) the selection of a place for the next general meeting.

THE RESERVE FUND.

SEC. 20. One-half of the net surplus of the previous year is paid in October to the circuits in proportion to the value of eggs delivered, while the remainder is put away

as a reserve fund. This is used in the business, but is credited in a separate account to the circuits in proportion to the value of eggs delivered.

The sums credited in this account can be paid only when the society is dissolved, unless in the opinion of the executive committee there is no use for the entire amount. The share in the reserve fund belonging to an individual member or to a circuit is not amenable to attachment by creditors, yet claims of the cooperative society against said parties are excepted. At the eventual settlement with the circuits the earliest series are paid off first. The shares of the circuit in the reserve fund draw an annual interest of 4 per cent, which is paid at the same time as the surplus.

THE MANAGEMENT.

SEC. 21. The money of the society must be deposited in the bank designated by the representatives. Payments are made by the bank on the order of two members of the executive committee. The payments to the circuits for the eggs that have been received shall be made as soon as possible.

SEC. 22. Under the supervision of the president, the manager is in charge of the daily operations in accordance with the instructions received from the executive committee. He is to keep the storehouse and contents insured against fire and the eggs shipped insured against losses at sea.

SEC. 23. The president, manager, treasurer, and branch managers must give sufficient bonds for the property entrusted to them. Contracts and affidavits are brought before the representatives for ratification.

SEC. 24. The cooperative society can only be dissolved by a two-thirds majority vote at two successive general meetings. Changes in the rules can only be made when at least two-thirds of the members present at the general meeting thus decide.

SEC. 25. At the eventual dissolution of the society its property shall be turned into cash. Thereupon all the outside obligations of the society shall be paid first. In case a part of the reserve fund is used for this purpose, the remainder is divided among the circuits in proportion to the amounts with which they are credited in the account of the reserve fund. In case there is a surplus on hand, it is to be divided among the circuits in proportion to the value of the eggs delivered in the financial year immediately preceding the dissolution.

SEC. 26. These rules go into effect April 1, 1902.

Adopted in the general meeting at Copenhagen March 22, 1902.

Rules of Circuit No. — of the Danish Cooperative Egg Export Society.

SECTION 1. The circuit belongs to the cooperative society "The Danish Cooperative Egg Export" and is required to conform to the rules of the same that are in force from time to time.

SEC. 2. Members are admitted by applying to the directors of the circuit. Each member pays to the Danish Cooperative Egg Export 50 öre [about 13½ cents] as admission fee and 1 öre per hen to the circuit.

SEC. 3. All members are, without any declaration on their part, subject to the circuit laws as they now are or as they may be legally changed hereafter.

SEC. 4. Members are required to deliver all the eggs (so many as are required for the household or for setting or have been casually found are excepted) in such a way and at such times as are fixed by the directors of the circuit. This agreement is binding for one year at a time.

SEC. 5. Eggs over seven days old must not be delivered. A violation of this, as well as delivering spoiled eggs, is punishable by a fine of 5 kroner [\$1.34], imposed by the directors of the cooperative society; and, if repeated, the fine may be increased to 10 kroner [\$2.68]. One half of the fine goes to the Danish Cooperative Society,

the other half to the circuit in question. The finding of the directors of the parent society is not subject to appeal, in spite of the decision of the circuit directors or the egg collector. In case of a suit to collect the fine the expenses are paid by the party on whom the fine was imposed, the ordinance of August 6, 1824, notwithstanding.

SEC. 6. The eggs must be carefully gathered once a day and during the hot season at least twice a day. Eggs that have been casually found must not be delivered. Only artificial eggs must be used as nest eggs, and the hens must be excluded from the nests at night.

SEC. 7. Only clean eggs are to be delivered, and they must be protected against sun, rain, and frost by producers as well as egg collectors.

SEC. 8. The members must deliver to the circuit eggs from their own poultry only; the violation of this rule is punished in the first instance by a fine of 25 öre [nearly 7 cents]—afterwards 50 öre—a pound of the eggs that have been delivered contrary to these rules.

SEC. 9. The membership list of the circuit shall have the number, name, and occupation of each member, and a member's number on the list shall be that with which he stamps his eggs. The president of the circuit shall report changes in the list to the main office of the cooperative society. By paying about 25 öre [nearly 7 cents] each member receives a rubber stamp, ink, and pad. The stamp has the number of the circuit and of the member, and the member must use it to stamp neatly and distinctly the large, thick end of every egg before delivering.

SEC. 10. The egg collector will accept only eggs that are clean and that have been distinctly and properly stamped.

SEC. 11. The directors of a circuit may temporarily refuse to accept the eggs of a member, and a member may be excluded by a majority vote of a general meeting or by the directors of the cooperative society.

SEC. 12. The necessary money to pay cash for the eggs of the members is borrowed; the members are liable for the debt individually and as an organization, and the money is paid out to the egg collector, who gives satisfactory bonds.

SEC. 13. The eggs are paid for at prices fixed by the directors of the circuit. What the eggs bring over and above this price is paid to the members only after a sum sufficient, in the judgment of the directors, to run the business has been put aside.

SEC. 14. A withdrawal is reported to the directors of the circuit, but the connection ceases only after the close of the financial year. Members that have withdrawn or been excluded have no claim to the surplus, reserve fund, or to any property belonging to the society, and must without reimbursement surrender their stamps to the president of the circuit.

SEC. 15. The directors of the circuit consist of an uneven number of members, namely —, and are chosen by the general meeting (of the circuit).

SEC. 16. The duty of the directors of the circuit is to see to it that the business of the circuit is furthered in the best manner possible by taking such measures as shall insure the delivery of the eggs to the cooperative society in the condition required. The directors of the circuit appoint and dismiss the egg collector and others employed in the business of the circuit, determine their pay, and supervise their work.

SEC. 17. The general meeting elect annually two auditors to audit the accounts of the year before the end of January of the following year.

SEC. 18. The regular general meeting is held in the beginning of February, so early that propositions, if any, to the directors of the parent society, may be forwarded to its president before the 20th of February.

SEC. 19. The circuit sends one deputy to the general meeting of the cooperative society.

SEC. 20. When the circuit is eventually dissolved and all obligations paid, the remaining assets, if any, shall be divided among the members in proportion to the value of the eggs delivered during the last financial year.

Adopted at a general meeting at —, 19—.